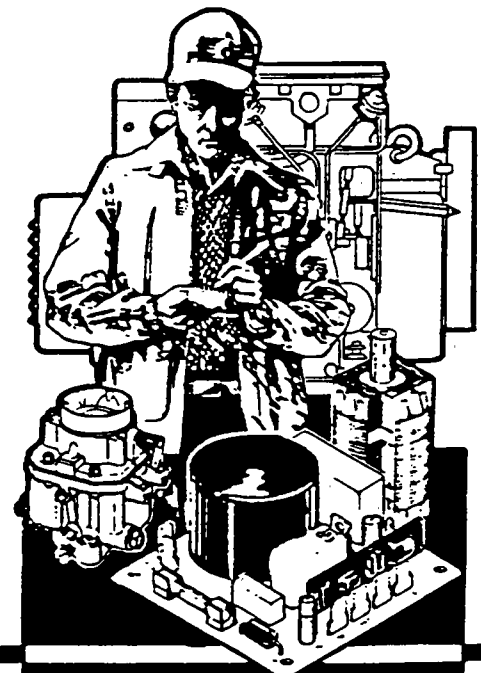

Onan

Parts Manual

AJ

GenSet



Onan Service Parts

924-0221
1-90 (SPEC P)
Replaces 4-82 (Spec A-N)
Printed in U.S.A.

SAFETY PRECAUTIONS

The following symbols are used in Onan manuals to alert users to the potentially dangerous conditions relating to maintenance of the equipment and replacement of parts. Please read and observe.

⚠ DANGER *This symbol warns of immediate hazards which will result in severe personal injury or death.*

⚠ WARNING *This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.*

⚠ CAUTION *This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.*

MODEL IDENTIFICATION

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO., and SERIAL NO. from the Onan nameplate.

For handy reference, insert your nameplate information in the spaces below:

MODEL AND SPEC NO.

SERIAL NO.

PRODUCT SAFETY PRECAUTIONS

⚠ WARNING

Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.

⚠ WARNING

Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!

⚠ WARNING

Contact with BENZINE and LEAD, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking, draining or adding gasoline and fuel additives, or using solvents take all necessary precautions not to ingest, breathe the fumes, or contact the liquids. Use adequate ventilation and wear protective gloves, masks and clothing!

Introduction

This catalog applies to the AJ generating sets as listed below and factory installed options. Parts are arranged in groups of related items. Each illustrated part is identified by a reference number corresponding to the same reference number in the parts list for that group. Parts illustrations are typical. Using the MODEL and SPEC NO. from the set nameplate, select the Parts Key No. (1, 2, etc., in the last column) that applies to your Generator Set Model and Spec No. This Parts Key No. represents parts that differ between models. Unless otherwise mentioned in the description, parts are interchangeable between models. Right and left sides are determined by facing the engine end (front) of the set.

Generator Set Data Table

MODEL AND SPEC NO.*	ELECTRICAL DATA					PARTS KEY NO.
	TYPE	WATTS	VOLTS†	HERTZ	RPM	
.8AJ-51M/ .8AJ-52M/ 1.0AJ-1M/ 1.0AJ-2M/	Manual Manual Manual Manual	800 800 1000 1000	120AC 240AC 120AC 240AC	50 50 60 60	1500 1500 1800 1800	1
.8AJ-51R/ .8AJ-52R/ 1.0AJ-1R/ 1.0AJ-2R/	Remote Remote Remote Remote	800 800 1000 1000	120AC 240AC 120AC 240AC	50 50 60 60	1500 1500 1800 1800	2
1.5AJ-224E/ 1.5AJ-232E/	Battery Charger	1500 1500	24 32	DC DC	2400 2400	3
2.0AJ-51M/ 2.0AJ-52M/ 2.5AJ-1M/ (2.5AJ-EA) 2.5AJ-2M/	Manual Manual Manual Manual	2000 2000 2500 2500	120AC 240AC 120AC 240AC	50 50 60 60	3000 3000 3600 3600	4
2.0AJ-51P/ 2.0AJ-52P/ (2.0AJ-AU) 2.5AJ-1P/ (2.5AJ-AA) 2.5AJ-2P/	Portable Portable Portable Portable	2000 2000 2500 2500	120AC 240AC 120AC 240AC	50 50 60 60	3000 3000 3600 3600	5
2.0AJ-53M/ 2.5AJ-3M/ (2.5AJ-EB)	Manual Manual	2000 2500	120/240AC 120/240AC	50 60	3000 3600	6
2.0AJ-53P/ (2.0AJ-AN) 2.5AJ-3P/ (2.5AJ-AB)	Portable Portable	2000 2500	120/240AC 120/240AC	50 60	3000 3600	7
2.0AJ-52R/ 2.5AJ-2R/ 2.5AJ-1R/	Remote Remote Remote	2000 2500 2500	120AC 240AC 240AC 120AC	50 50 60 60	3000 3000 3600 3600	8
2.0AJ-53R/ 2.5AJ-3R/	Remote Remote	2000 2500	120/240AC 120/240AC	50 60	3000 3600	9
1.5AJ-115M/ 2.0AJ-AU	Manual Portable	1500	115 240AC	DC 50	2600 1500	10

* - Spec Letter advances with manufacturing changes (A to B, B to C, etc.)

† - Reference to 120, 240, and 120/240 volt also applies to 115, 230, and 115/230 volt.

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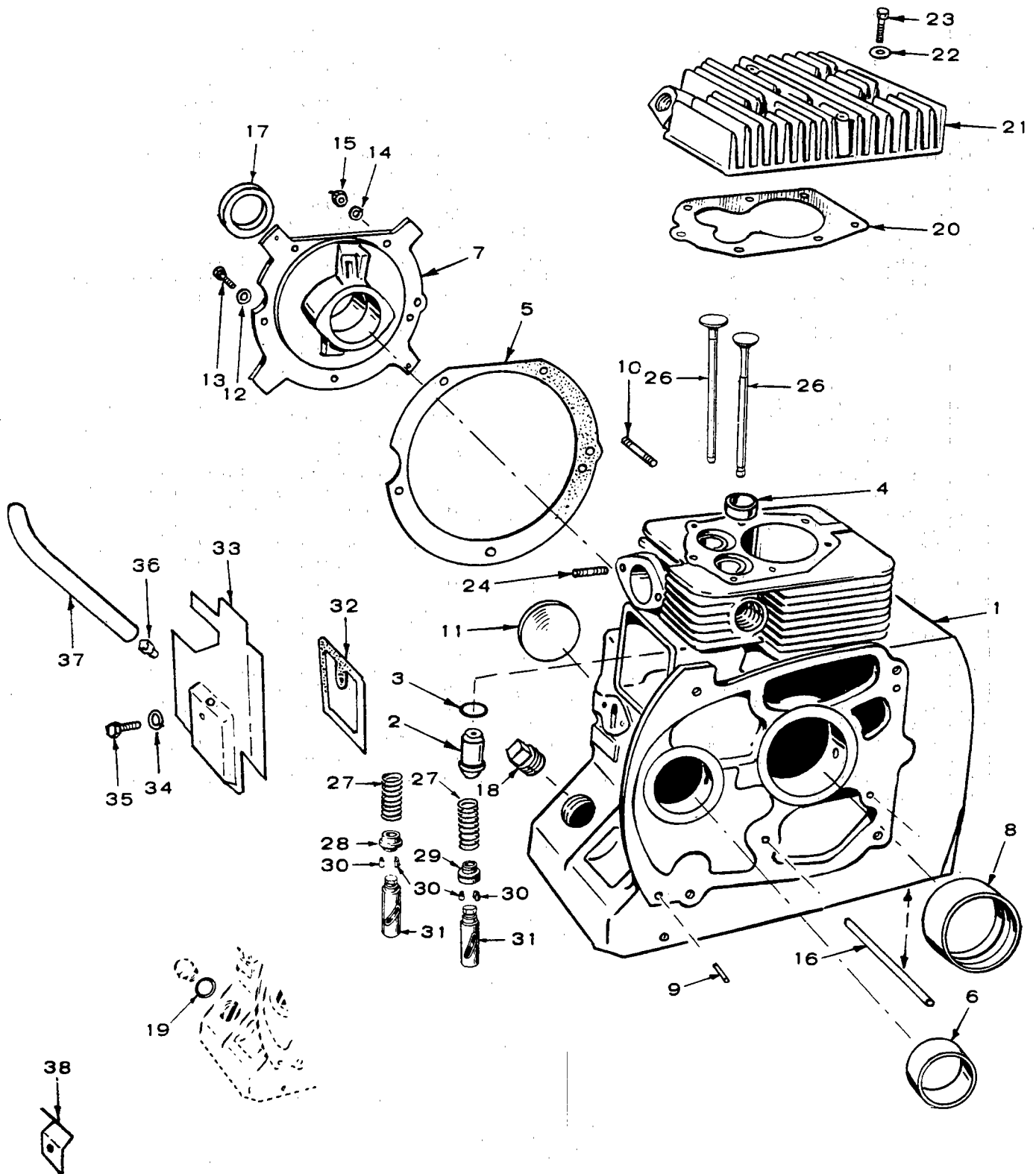
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Cylinder Block

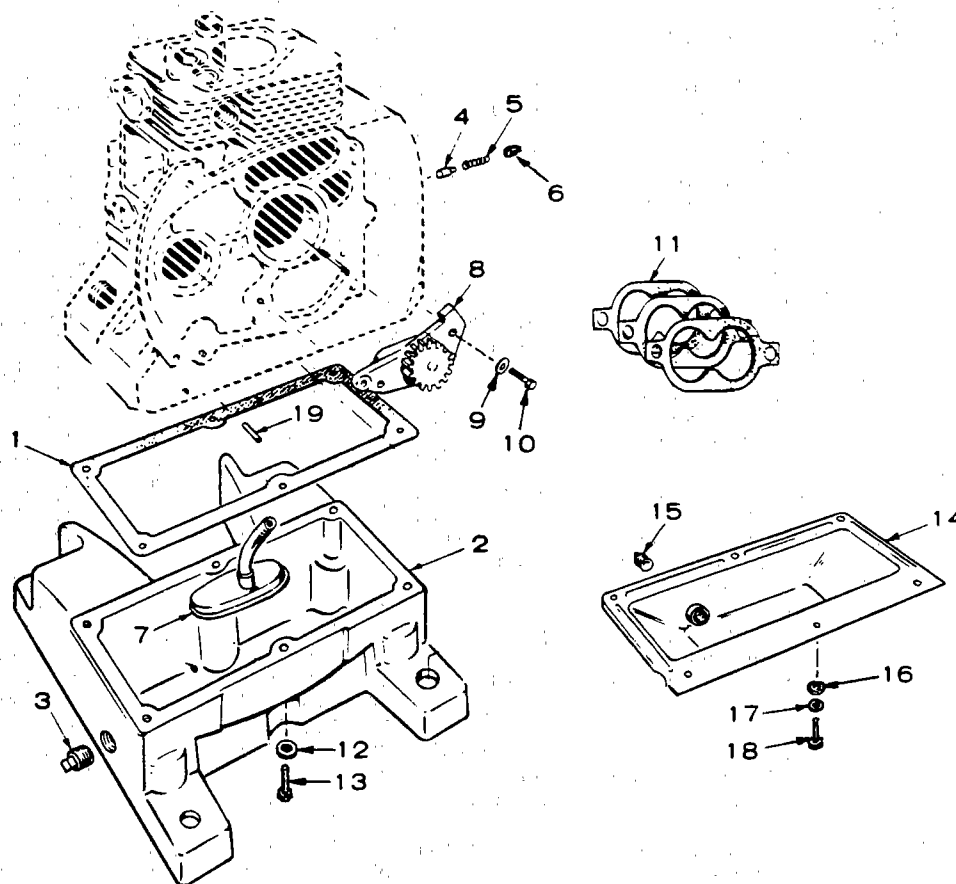


Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Block Assembly, Cylinder (Includes Parts Marked *)	15	110-0445	4	*Nut, Hex (Special)
	110-0876	1	Key 1,2,10	16	120-0387	1	*Tube, Crankcase Oil - Keys 4 through 9 (Also Key 3, 24 Volt Output - Begin Spec J)
	110-0877	1	Key 3 (24 Volt Output, Begin Spec J)	17	509-0041	1	Seal, Oil - (NOTE: Available in Overhaul Gasket Kit 168-0062)
	110-0876	1	Key 3 (24 Volt Output, Spec A through H)	18	505-0130	1	Plug, Oil Fill (3/4") (Cast Iron)
	110-0876	1	Key 3 (32 Volt Output)	19		1	Gasket, Fill Plug (Order 505-0130 Plug)
	110-0877	1	Key 4 through 9	20	110-0836	1	Gasket, Cylinder Head
2	110-0441	2	*Guide, Valve	21	110-1778	1	Head, Cylinder
3	110-0068	1	*Gasket, Valve Guide - Intake	22	526-0122	7	Washer, Flat (11/32" ID x 2-3/32" OD x 10 Gauge Thk)
4			Insert, Exhaust Valve Seat	23			Screw, Cap - Hex Head (Special)
	110-0826	1	* Standard		110-0879	4	(Special)
	110-0826-02	1	.002" Oversize		110-0284	3	Stud, Carburetor Mounting
	110-0826-05	1	.005" Oversize	24		2	Begin Spec K (1/4 x 1-1/2")
	110-0826-10	1	.010" Oversize		520-0632	2	Specs A through J (1/4 x 1-9/16")
	110-0826-25	1	.025" Oversize	26			Valve
5	101-0257	1	*Gasket Kit, Bearing Plate to Engine		110-0828	1	Intake
6	101-0367	2	*Bearing, Camshaft - Precision		110-0827	1	Exhaust
7			*Plate, Rear Bearing (Less Bearing)	27	110-0609	2	Spring, Valve
	101-0233	1	Key 1,2,10 (Also Key 3, 24 Volt Output - Specs A through H)	28	110-0558	1	Retainer, Intake Valve
	101-0252	1	Keys 4 through 9 (Also Key 3, 24 Volt Output - Begin Spec J)	29	110-0540	1	Rotocap, Exhaust Valve
	101-0404	1	Sets With Low Oil Pressure Cut-Off - Key 3 (Begin Spec J) Keys 4 through 9 (Begin Spec F)	30	110-0008	4	Lock, Valve Spring Retainer
8			Bearing, Crankshaft - Precision	31			Tappet, Valve
	101-0290	2	* Standard		115-0006	2	Standard
	101-0290-02	2	.002" Undersize		115-0006-05	2	.005" Oversize
	101-0290-10	2	.010" Undersize	32	110-0832	1	Gasket, Valve Cover
	101-0290-20	2	.020" Undersize	33	110-0840	1	Cover, Valve
	101-0290-30	2	.030" Undersize	34	526-0063	1	Washer, Flat - Copper (17/64" ID x 7/16" OD x 1/32" Thk)
9	516-0012	2	*Pin, Dowel - Gear Cover Align (1/4 x 5/8")	35	800-0015	1	Screw, Cap - Hex Head (1/4-20 x 3")
10	520-0526	4	*Stud, Rear Bearing Plate (5/16 x 1-1/4")	36	123-0486	1	Valve, Breather
11	517-0048	1	*Plug, Expansion (1-5/8" Dia.)	37	503-0736	1	Hose, Breather (Not used on Key 3, 24 Volt Output - Begin Spec J)
12	526-0065	1	*Washer, Flat (21/64" ID x 9/16" OD x 1/16" Thk)	38	123-0788	1	Baffle, Breather - Key 3, 24 Volt Output - Begin Spec J
13	800-0028	1	*Screw, Cap - Hex Head (5/16-18 x 1")				
14	850-0045	4	*Washer, Lock - Spring (5/16")				

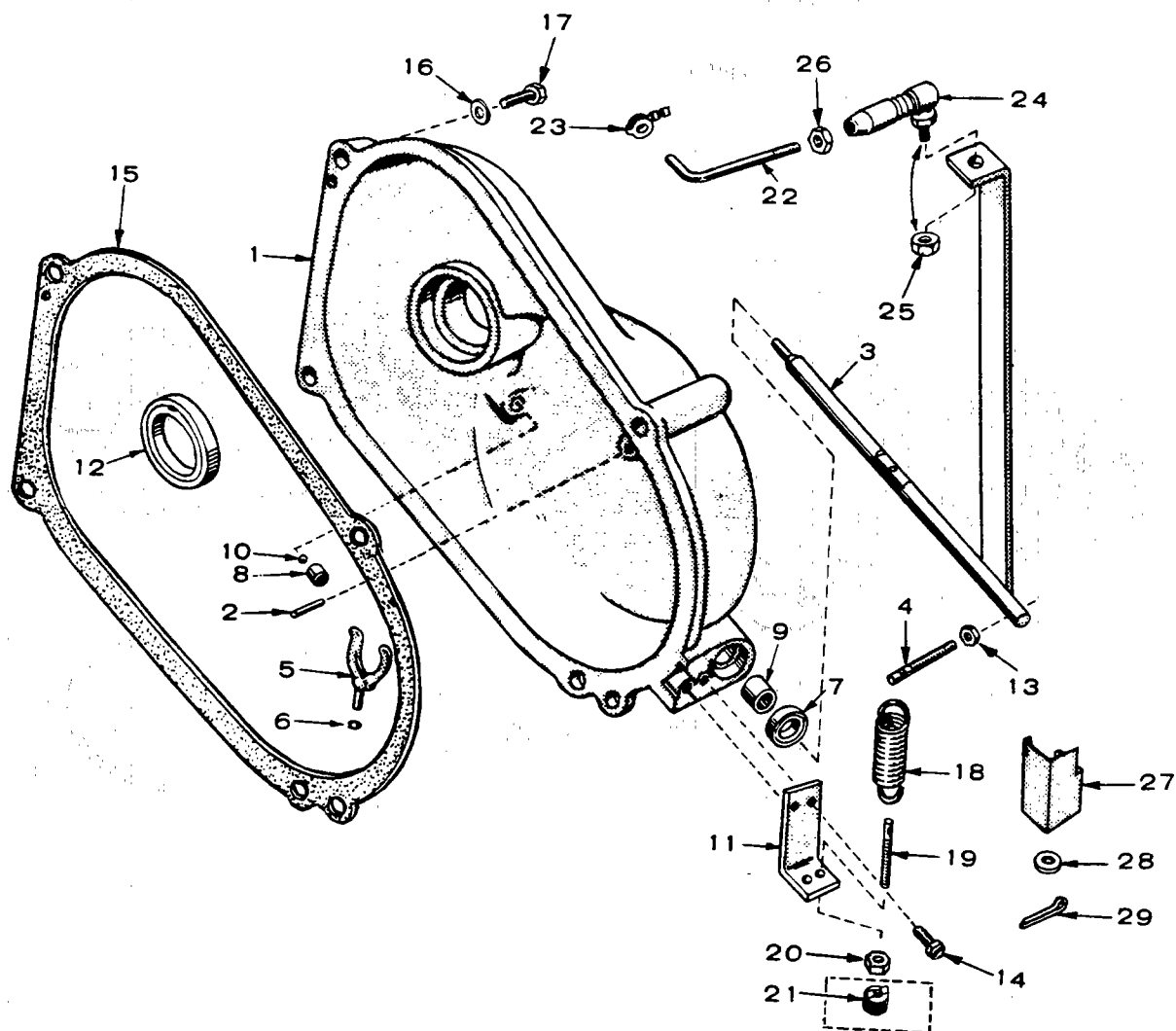
* - Parts Included in Cylinder Block Assembly.

Oil System



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	102-0018	1	Gasket, Oil Base or Pan Mounting	9	850-0040	2	Washer, Lock - Spring (1/4") - Keys 4 through 9 (Also Key 3, 24 Volt Output - Begin Spec J)
2	102-0439	1	Keys 1,2,3,4,6,8,9,10	10	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1") - Keys 4 through 9 (Also Key 3, 24 Volt Output - Begin Spec J)
	102-0452	1	Units with Oil Base Heater - Keys 1,2,3,4,6,8,9,10	11	120-0161	1	Kit, Gasket - Oil Pump - Keys 4 through 9 (Also Key 3, 24 Volt Output - Begin Spec J)
3	505-0110	1	Plug, Oil Drain (3/8") - Keys 1,2,3,4,6,8,9,10	12	850-0050	6	Washer, Lock - Spring (3/8") - Keys 1,2,3,4,6,8,9,10
4	120-0012	1	Plunger, Oil By-Pass - Keys 4,5,6,7,8,9 (Also Key 3, 24 Volt Output - Begin Spec J)	13			Screw, Cap - Hex Head - Key 1,2,3,4,6,8,9,10
5	120-0140	1	Spring, Oil By-Pass - Keys 4,5,6,7,8,9 (Also Key 3, 24 Volt Output - Begin Spec J)		102-0455	3	3/8-16 x 1-1/4"
6	505-0274	1	Plug, Countersunk, Hex (1/8") Oil By-Pass - Keys 4,5,6,7,8,9 (Also Key 3, 24 Volt Output - Begin Spec J)		800-0053	3	3/8-16 x 1-3/4"
7			Cup, Oil Pump Intake (Includes Cup, Pipe and Screen)	14	102-0319	1	Pan, Oil - Keys 4, 5, and 7
	120-0571	1	Key 3 (24 Volt Output) - Begin Spec J	15	505-0054	1	Plug, Oil Drain (1/4") - Keys 5 and 7
	120-0571	1	Key 4 through 9 - Begin Spec F	16	526-0127	3	Washer, Flat (13/32" ID x 25/32" OD x 1/8" Thk) - Keys 5 and 7
	120-0389	1	Key 4 through 9 - Specs A through E	17	850-0050	6	Washer, Lock - Spring (3/8") (NOTE: Keys 5 and 7 only uses 3)
8			Pump Assembly, Oil	17	850-0048	3	Washer, Lock Hi-Collar - Oil Pan (3/8") - Keys 5 and 7
	120-0394	1	Key 3 (24 Volt Output) - Begin Spec J	18	806-0027	6	Screw, Cap - Counter Bore (3/8-16 x 3/4") Keys 5 and 7
	120-0394	1	Keys 4 through 9 - Begin Spec F	19		1	Tube, Crankcase Oil (See Cylinder Block Group)
	120-0200	1	Keys 4 through 9 - Specs A through E				

Gearcase



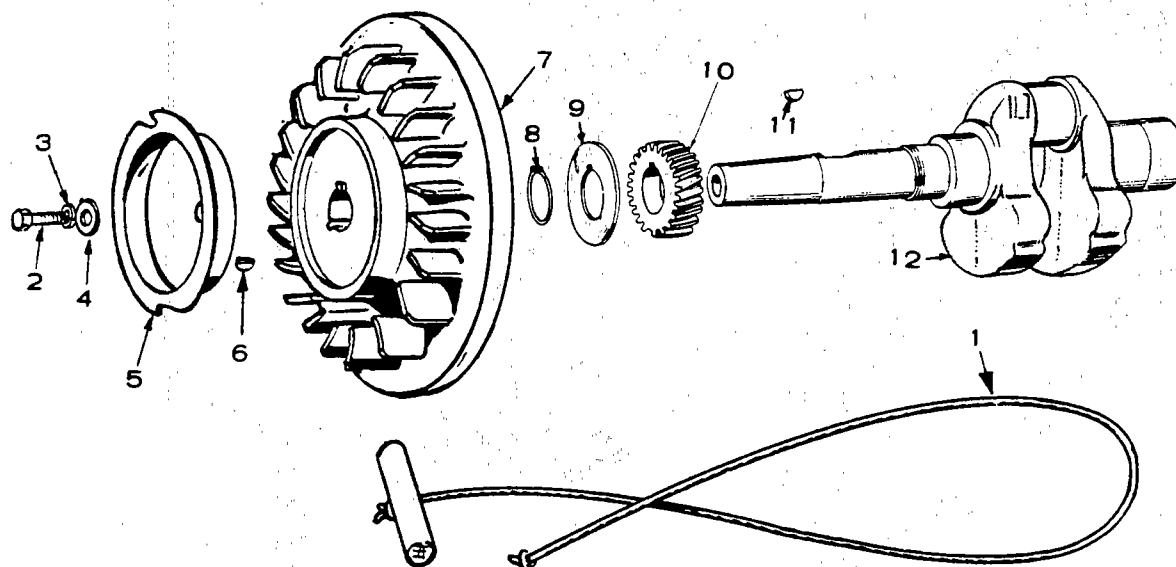
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	103-0222	1	Gearcase Assembly Begin Spec G (Includes Parts Marked *)	18	150-0098	1	Spring, Governor
	103-0141	1	Specs A through F (Includes Parts Marked †)	19	150-0213	1	Stud, Governor Adjusting
2	516-0117	1	*†Pin, Roll (3/16 x 3/16")	20	870-0131	1	Nut, Hex W/ET (#10-32) - Key 1,2,4,5,6,7,8,9,10
3			Arm and Shaft, Governor	21	150-0033	1	Nut, Governor Adjusting - Key 3
	150-0789	1	* Begin Spec G	22			Link, Governor Arm to Carburetor
	150-0575	1	† Specs A through F		150-0786	1	Begin Spec G
4	150-0177	1	*†Stud, Sensitivity Adjustment		150-0578	1	Specs A through F
5	150-0620	1	*†Yoke (Includes Retainer Ring)	23	518-0004	1	Clip, Governor Link
6	518-0129	1	*†Ring, Yoke Retainer	24	150-0974	1	Joint, Ball
7	509-0008	1	*†Seal, Oil	25	870-0131	1	Nut, Hex W/ET (#10-32)
8	510-0008	1	*†Bearing, Shaft - Lower	26	870-0053	1	Nut, Hex (#10-32)
9	510-0013	1	*†Bearing, Shaft - Upper	27	150-0198	1	Cover, Governor Spring - Specs A through F
10	510-0014	1	*†Ball, Thrust	28	150-0140	1	*Washer, Governor Yoke - Spec A Only
11	150-0156	1	*†Bracket, Governor Spring	29	516-0036	1	*Pin, Cotter - Governor Yoke - Spec A Only (1/16 x 3/8")
12	509-0012	1	*†Seal, Oil				
13	870-0053	1	*†Nut, Hex (#10-32)				
14	815-0391	1	*†Screw, Cap - Hex Head - Slotted (#10-32 x 1/2")				
15	103-0013	1	Gasket, Gearcase Mounting				
16	850-0045	4	Washer, Lock - Spring (5/16")				
17	110-0284	2	Screw, Cap - Hex Head (Special)				
	800-0034	2	5/16-18 x 2-1/4"				

* - Parts included in 103-0222 Gearcase Assembly.

† - Parts included in 103-0141 Gearcase Assembly.

* - During Spec A the hole for cotter pin was replaced by a retaining ring groove.

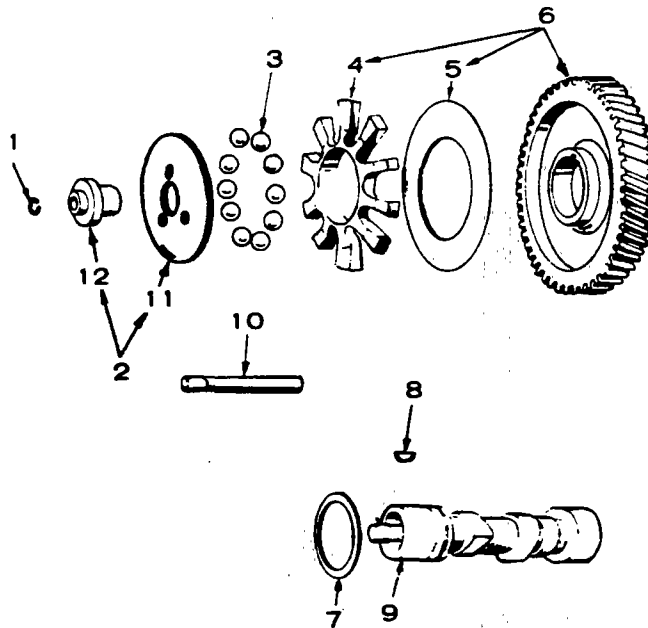
Crankshaft and Flywheel



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	192-0023	1	Rope and Handle	7			Flywheel (Includes Magnets)
2	104-0237	1	Screw, Cap - Hex Head (Special)	160-0459	1		Includes 2-815-0193 Screws (Keys 1,2,3,10)
3	850-0055	1	Washer, Lock - Spring (7/16")	160-0460	1		Includes 2-815-0259 Screws (Keys 4 through 9)
4			Washer, Flat (15/32 ID x 1-1/4" OD)	8	518-0012	1	Ring, Lock (1-3/16")
	526-0017	1	1/4" Thk - Keys 1,2,3,6,8,9,10	9	104-0050	1	Washer, Crankshaft Gear
	526-0141	1	1/8" Thk - Keys 4,5,7	10	104-0048	1	Gear, Crankshaft
5	192-0261	1	Sheave, Rope	11	515-0001	1	Key, Crankshaft Gear (1/2 x 1/8")
6	515-0113	1	*Key, Flywheel (#9)	12	104-1276	1	Crankshaft (Includes Parts Marked *)

* - Parts included in 104-1276 Crankshaft Kit.

Camshaft



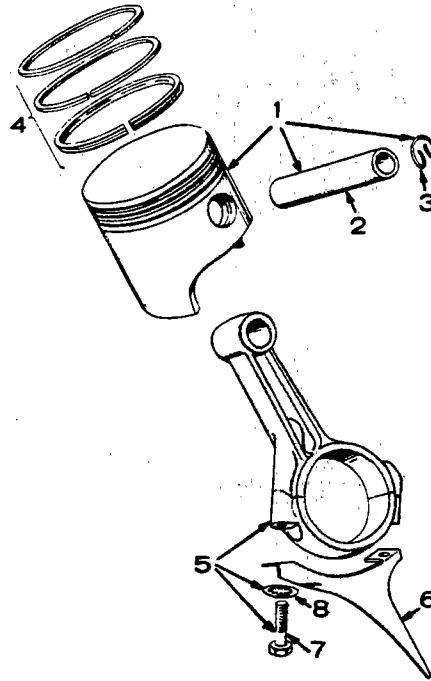
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REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0078	1	Ring, Lock	6	105-0377	1	Gear Assembly (Includes Spacer and Plate)
2	150-1695	1	Cup, Governor (Retained Hub) (Kit) Early Models (Includes Parts Marked +)	7	105-0004	1	Washer, Thrust
3			Ball, Fly - Governor	8	515-0001	1	Key, Woodruff - Gear (1/2 x 1/8")
	510-0015	10	Keys 1,2,3,10 (9/16")	9	105-0139	1	Camshaft (Includes Center Pin)
	510-0015	5	Keys 4 through 9 (9/16")	10	150-0075	1	Pin, Center
4			*Spacer, Governor Flyball	11	150-1520	1	+Cup, Governor - Late Models
	150-1257	1	Begin Serial Number 370369 During Spec L	12	150-1519	1	+Hub, Governor Cup - Late Models
	150-1257	1	Spec A through Serial Number 668253 During Spec G				
5			*Plate, Governor Flyball				
	150-0077	1	Begin Serial Number 370369 During Spec L				
	150-0077	1	Spec A through Serial Number 668253 During Spec G				

* - Spacer and plate not sold separately for units manufactured between Serial Number 668253 During Spec G and Serial Number 370369 During Spec - Order Gear Assembly complete.

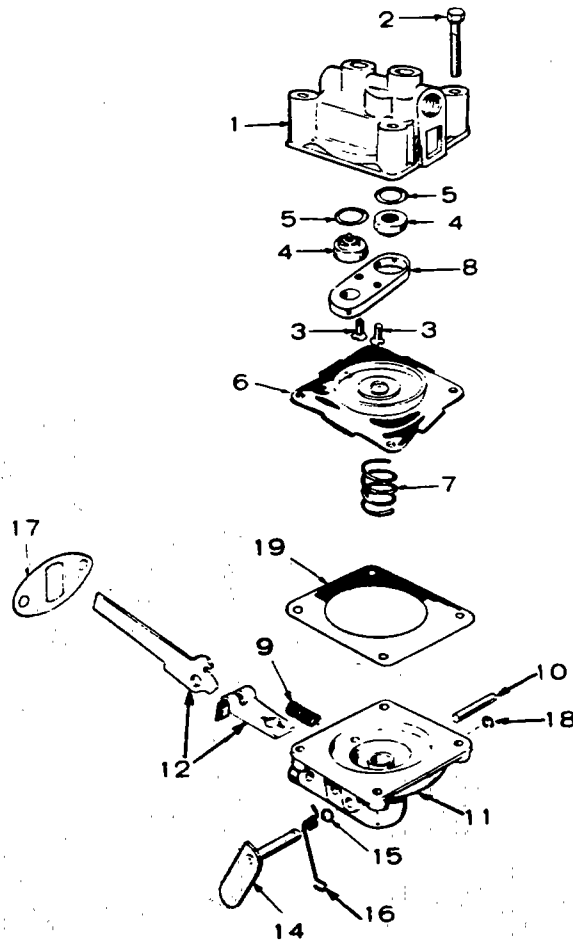
+ - Parts included in 150-1695 Governor Cup Kit.

Piston and Rod



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	112-0127	1	Piston and Pin Assembly	5	114-0095	1	Rod, Connecting
	112-0127-05	1	Standard		114-0095-10	1	Standard
	112-0127-10	1	.005" Oversize		114-0095-20	1	.010" Undersize
	112-0127-20	1	.010" Oversize		114-0095-30	1	.020" Undersize
	112-0127-30	1	.020" Oversize				.030" Undersize
	112-0127-40	1	.030" Oversize	6	114-0089	1	Dipper
	112-0127-40	1	.040" Oversize		114-0089	1	Keys 1,2,10
2	112-0063	1	Pin, Piston		114-0089	1	Key 3 (24 Volt Output) -
3	112-0013	2	Clip, Piston Pin				Spec A through H
4	113-0175	1	Ring Set		114-0089	1	Key 3 (32 Volt Output)
	113-0175-10	1	Standard	7	114-0023	2	Screw, Rod Cap (Special)
	113-0175-20	1	.010" Oversize	8	854-0014	2	Washer, Lock (I.T. Shakeproof)
	113-0175-30	1	.020" Oversize				(1/4")
	113-0175-40	1	.030" Oversize				
	113-0175-40	1	.040" Oversize				

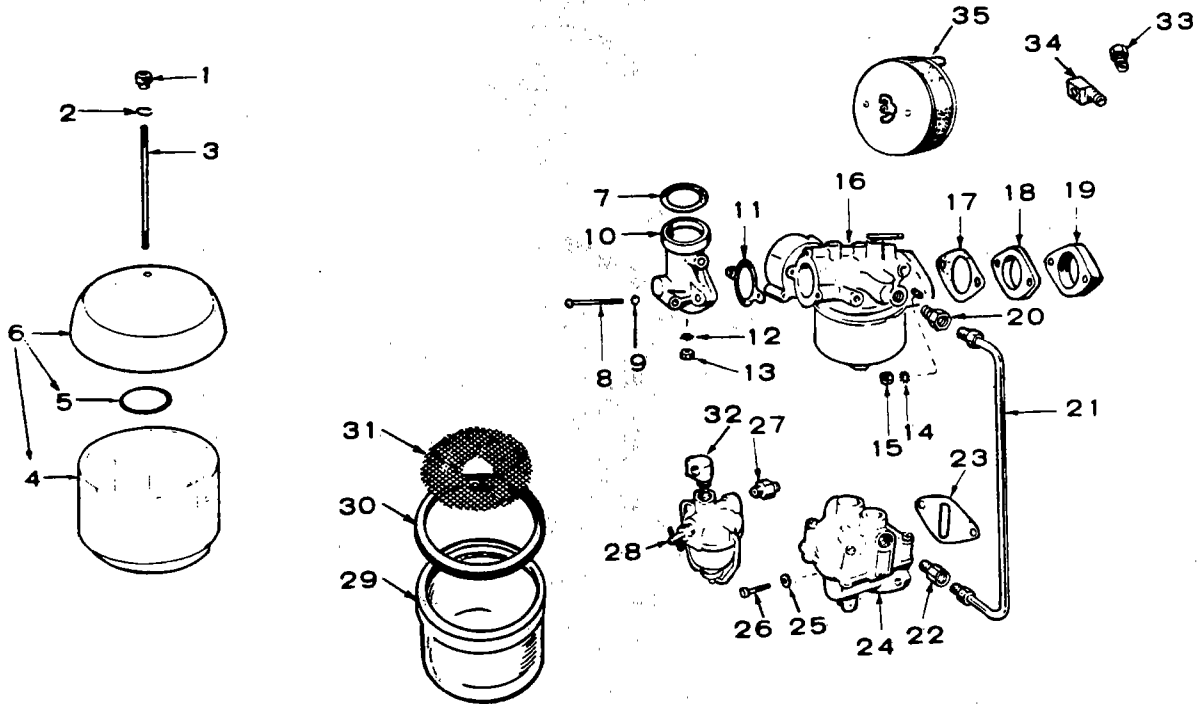
Fuel Pump Parts



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	149-0693	1	Pump, Fuel - Complete	9	149-0675	1	*Spring
	149-0526	1	Kit, Repair (Includes Parts Marked *)	10	516-0113	1	Pin, Rocker Arm (.177 x .859)
1		1	Body (Not Sold Separately)	11		1	Body (Not Sold Separately)
2	815-0148	4	Screw, Cap - Hex Head (#8-32 x 7/8")	12	149-0710	1	Link and Arm, Rocker
3	815-0147	2	Screw, Phillips Self Tapping (#6-32 x 5/8")	14	149-0558	1	Lever, Primer
4	149-0096	2	*Valve and Cage	15	509-0065	2	Seal, "O" Ring
5	149-0095	2	*Gasket, Valve	16	149-0404	1	Spring, Primer Lever
6	149-0582	1	*Diaphragm Assembly	17	149-0003	1	*Gasket, Pump Mounting
7	149-0672	1	*Spring	18	518-0129	1	Ring, Retainer
8	149-0539	1	Retainer, Valve Cage	19	149-0858	1	†*Gasket, Diaphragm - Lower Side

* - Parts Included in 149-0526 Repair Kit.
† - Used on some models to prevent air lock.

Fuel System (Gasoline)

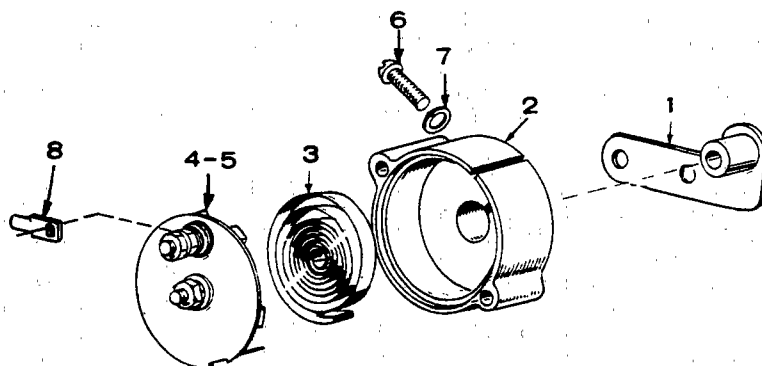


Fuel System (Gasoline)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-0587	1	Knob, Air Cleaner Hold-Down - Begin Serial Number 566319 During Spec E	17	141-0078	1	Gasket, Carburetor Mounting
2	850-0030	1	Washer, Lock - Spring (1/4") - Begin Serial Number 566319 During Spec E	18	145-0469	1	Plate, Carburetor Mounting
3	520-0538	1	Stud, Air Cleaner to Adapter - Begin Serial Number 566319 During Spec E (3/16 x 6-15/16")	19	145-0110	1	Spacer, Carburetor Mounting
4	140-0469	1	Cup, Air Cleaner - Begin Serial Number 566319 During Spec E (Includes Seal)	20	502-0003	1	Connector, Inverted Male - Carburetor Inlet
5	509-0135	1	Seal, "O" Ring - Begin Serial Number 566319 During Spec E	21	149-1110	1	Line, Fuel
6	140-0441	1	Air Cleaner - Complete Begin Serial Number 566319 During Spec E		149-0561	1	Begin Spec K
7	140-0443	1	Gasket, Air Cleaner Mounting - Begin Serial Number 566319 During Spec E	22	502-0003	1	Specs A through J
8	812-0086	2	Screw, Machine - Round Head Begin Spec K (#8-32 x 1-1/4")	23	149-0003	1	Connector, Inverted Male Pump Outlet
	812-0082	2	Begin Serial Number 566319 During Spec E through Spec J (8-32 x 3/4")	24	149-1784	1	Gasket, Pump Mounting
9	850-0025	2	Washer, Lock - Spring (#8) - Begin Serial Number 566319 During Spec E	25	526-0063	2	Pump, Fuel - Includes Mounting Gasket (See 149-0693 Group for Components)
10	140-0446	1	Adapter, Air Cleaner Keys 1,2,4 through 10	26	806-0008	2	Washer, Flat - Copper (17/64" ID x 7/16" OD x 1/32" Thk)
	140-1269	1	Key 3	27	502-0082	1	Screw, Machine - Counterbore Head (1/4-20 x 5/8")
11	145-0111	1	Gasket, Adapter to Carburetor	28	149-0079	1	Nipple, Hex (1/8-1/8")
12	854-0010	1	Washer, Lock - IT (#10) - Begin Serial Number 566319 During Spec E	29	149-0150	1	Filter, Fuel (Includes Parts Marked *)
13	870-0053	2	Nut, Hex (#10-32) - Begin Serial Number 566319 During Spec E	30	149-0149	1	*Bowl, Fuel Filter
14	853-0013	2	Washer, Lock - ET (1/4")	31	149-0202	1	*Gasket, Fuel Filter
15	115-0025	2	Nut, Hex (Special)	32	502-0440	1	*Screen, Fuel Filter
16			Carburetor (Gasoline) (Includes Mounting Gasket) (See Separate Group for Components)	33	502-0003	1	Elbow, 45° Fuel Filter Inlet - Begin Spec N (1/4")
	146-0296	1	Keys 1,3,4,5,6,7,10 (Manual Choke) - For Components See 146-0093	34	502-0002	1	Connector, Inverted Male Fuel Filter Inlet - Specs G through M
	146-0297	1	Keys 2,8,9 (Electric Choke) For Components See 146-0093	35	140-0369	1	Elbow, Inverted Male - Fuel Filter Inlet - Specs A through F (1/4")
					140-0408	1	Elbow, Street - 90° - Keys 3,4,8,9
							Air Cleaner - Spec A through Serial Number 566318 During Spec E (Includes Gasket and Element)
							Element

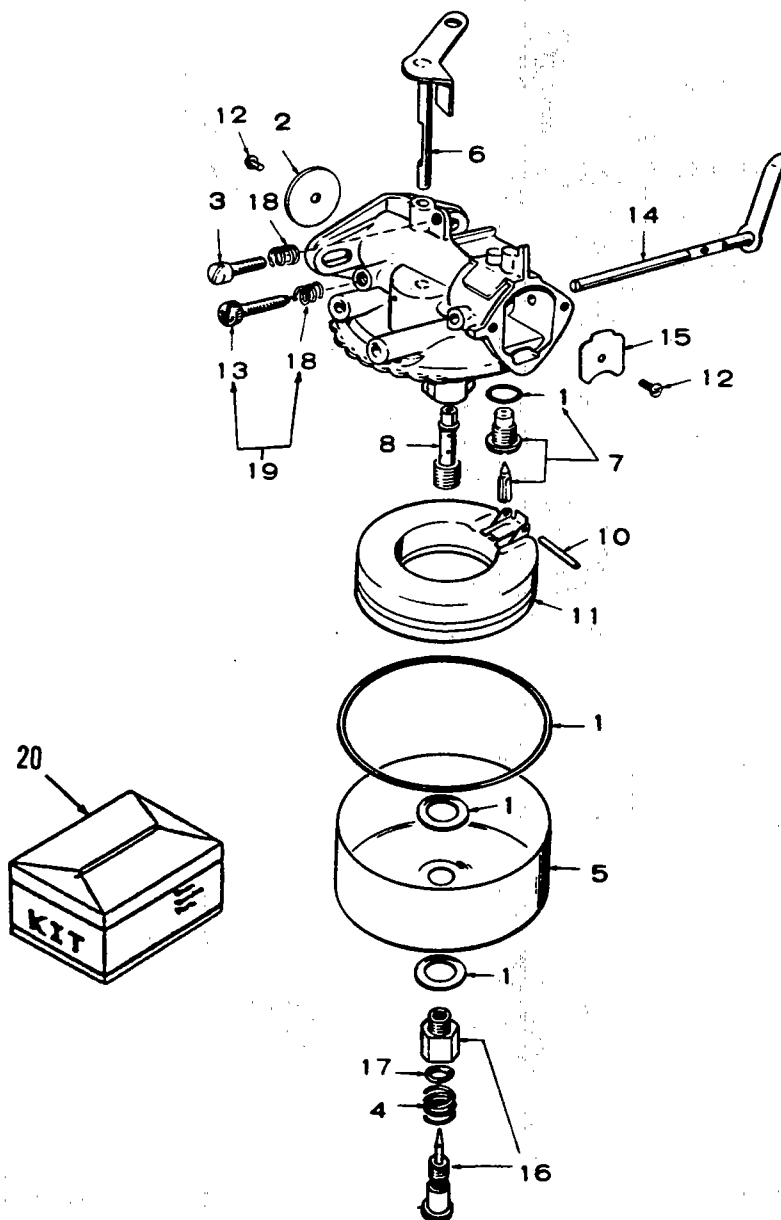
* - Parts Included in 149-0079 Filter.

Electric Choke - Keys 2,8,9



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	153-0420	1	Adapter, Choke to Carburetor	5	153-0115	1	Element & Cover, Choke (Includes 32 Volt Element) - Key 8,9 Spec A through G
	153-0196	1	Begin Spec K Spec A through J	6	815-0110	1	Screw (#10-32 x 7/8") - Choke Mounting
2	153-0058	1	Bracket, Housing	7	850-0030	1	Washer (#10), Lock
3	153-0017	1	Element, Bimetal	8	332-0527	1	Terminal, Wire
4	153-0114	1	Element & Cover, Choke (Includes 24 Volt Element) - Key 2 (Also Key 8, 9 Begin Spec H)				

Carburetor Parts (Gasoline) Specs A through J



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0093	1	Carburetor, Complete
	146-0123	1	Keys 2,8 (Electric Choke)
		1	Kit, Repair (Includes Parts Marked *)
1	146-0124	1	*Kit, Gasket
2	146-0119	1	Valve, Throttle
3	146-0122	1	+Screw, Throttle Stop
4	146-0117	1	Spring, High Speed Needle
5	146-0118	1	Bowl, Fuel
6	146-0112	1	Shaft Assembly, Throttle
7	146-0145	1	*Float Valve, Seat and Gasket Assembly
8	146-0113	1	Nozzle
10	146-0111	1	*Shaft, Float
11	146-0110	1	Float Assembly
12	146-0109	2	Screw and Washer
13	146-0116	1	§*Needle, Idle

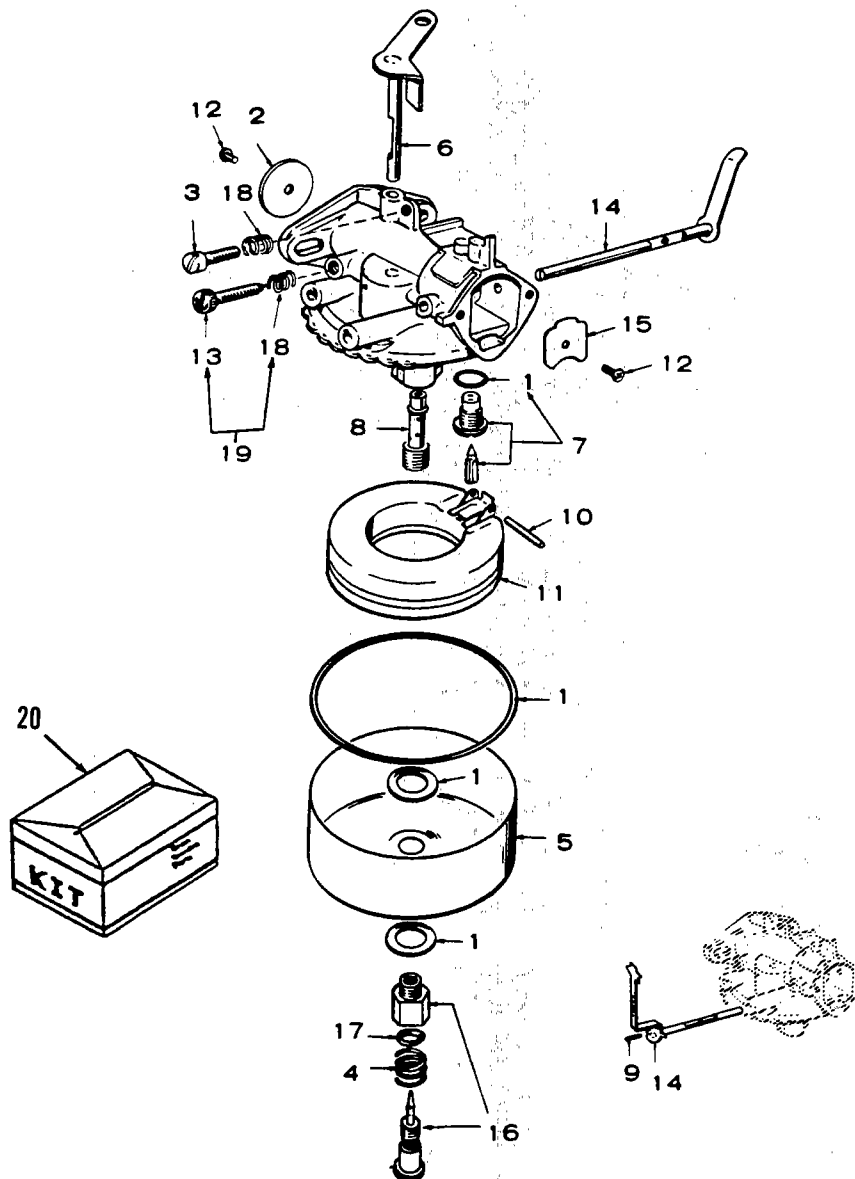
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
14	146-0107	1	Shaft Assembly, Choke - Keys 2,8
15	146-0104	1	Valve, Choke - Keys 2,8
16	146-0102	1	*Needle Assembly, Power
17	146-0120	1	Seal, "O" Ring - High Speed Needle
18	146-0186	1	+§Spring, Stop Screw and Idle Screw
19	146-0209	1	Needle Assembly, Idle Adjust (Package) (Includes Parts Marked §)
20	146-0261	1	Kit, Throttle Adjusting Screw (Includes Parts Marked +)

* - Parts Included in 146-0123 Repair Kit.

§ - Parts Included in 146-0209 Needle Assembly (Package).

+ - Parts Included in 146-0261 Kit.

Carburetor Parts (Gasoline) Begin Spec K

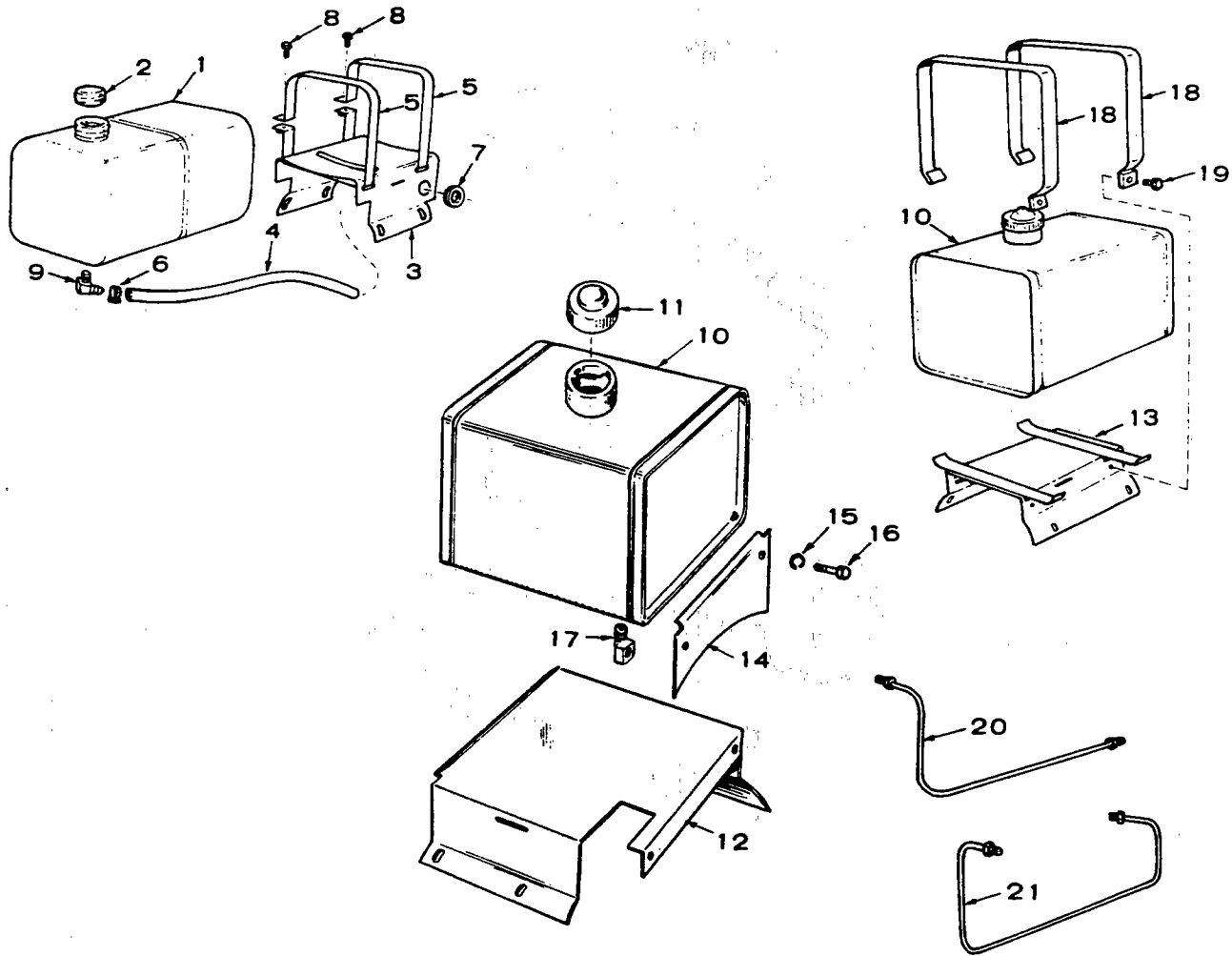


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0092	1	Carburetor, Complete
	146-0093	1	Keys 1,3,4,5,6,7,10 (Manual Choke)
	146-0123	1	Keys 2,8,9 (Electric Choke)
	146-0123	1	Kit, Repair (Includes Parts Marked *)
1	146-0124	1	*Kit, Gasket
2	146-0119	1	Valve, Throttle
3	146-0122	1	+Screw, Throttle Stop
4	146-0117	1	Spring, High Speed Needle
5	146-0118	1	Bowl, Fuel
6	146-0112	1	Shaft Assembly, Throttle
7	146-0145	1	*Float Valve, Seat and Gasket Assembly
8	146-0113	1	Nozzle
9	146-0114	1	Spring, Choke Stop - Keys 1, 3,4,5,6,7,10
10	146-0111	1	*Shaft, Float
11	146-0110	1	Float Assembly
12	146-0109	2	Screw and Washer
13	146-0116	1	§*Needle, Idle

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
14	146-0108	1	Shaft Assembly, Choke
	146-0107	1	Keys 1,3,4,5,6,7,10
15	146-0105	1	Keys 2,8,9
	146-0104	1	Valve, Choke
16	146-0102	1	Keys 1,3,4,5,6,7,10
17	146-0120	1	Keys 2,8,9
18	146-0186	1	*Needle Assembly, Power
19	146-0209	1	Seal, "O" Ring - High Speed Needle
20	146-0261	1	+§Spring, Stop Screw and Idle Screw
	146-0261	1	Needle Assembly, Idle Adjust (Package) (Includes Parts Marked §)
	146-0261	1	Kit, Throttle Adjusting Screw (Includes Parts Marked +)

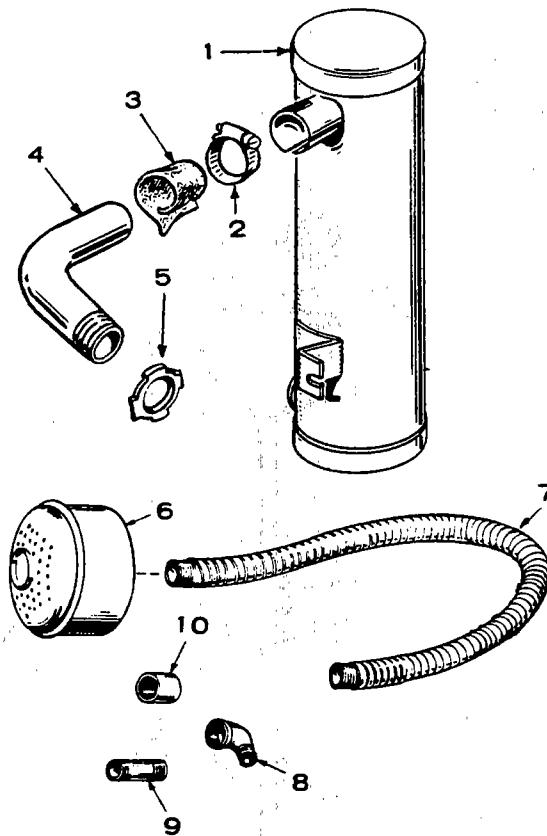
* - Parts Included in 146-0123 Repair Kit.
§ - Parts Included in 146-0209 Needle Assembly (Package).
+ - Parts Included in 146-0261 Kit.

Fuel Tank - Keys 1,4,5,6,7,10



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	159-1027	1	Tank, Fuel - Begin Spec N (1.5 gal.)	12	159-0717	1	Bracket, Tank Mounting - Specs G through M
2	159-1028	1	Cap, Fuel Tank - Begin Spec N	13	159-0485	1	Bracket, Tank Mounting - Specs A through F
3	159-1034	1	Bracket, Fuel Tank Mounting - Begin Spec N	14	159-0718	1	Bracket, Tank Hold-down - Specs G through M
4	503-0754	1	Hose, Tank to Filter - Begin Spec N	15	850-0040	2	Washer, Lock - Spring (1/4") Specs G through M
5	159-1035	2	Band, Fuel Tank - Begin Spec N	16	800-0005	2	Screw, Cap - Hex Head (1/4-20 x 3/4") - Specs G through M
6	503-0685	2	Clamp, Hose - Begin Spec N (7/32 to 5/8")	17	502-0002	1	Elbow, Inverted Male (1/4")
7	508-0001	1	Grommet, Rubber - Begin Spec N (3/4 ID x 1-9/32" OD)	18	159-0487	2	Band, Tank Mounting - Specs A through F
8	821-0013	1	Screw, Cap - Hex Head Locking (1/4-20 x 1") - Begin Spec N	19	815-0208	2	Screw, Cap - Hex Head (1/4-20 x 1") - Specs A through F
9	502-0313	1	Elbow, Adapter - Begin Spec N (1/4")	20	159-0728	1	Line, Fuel - Specs G through M
10	159-0234	1	Tank, Fuel (1.8 gal) - Specs A through M	21	159-0505	1	Line, Fuel - Specs A through F
11	159-0007	1	Cap, Fuel Tank - Specs A through M				

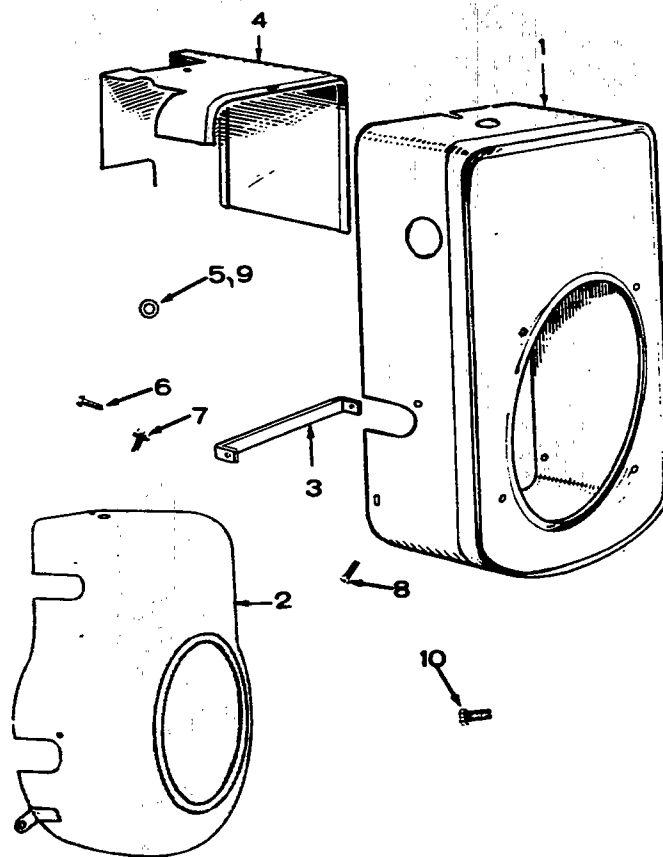
Exhaust System



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	155-0692	1	Muffler, Exhaust - Begin Spec G
2	503-0189	1	Clamp, Muffler - Begin Spec G
3	895-0096	1	Asbestos Strip - Begin Spec G
4	155-0691	1	Tube, Exhaust - Begin Spec G
5	331-0038	1	Nut, Lock - Chase (Special)
6			Muffler, Exhaust - Specs A through F
	155-0488	1	Keys 1,2,3,10
	155-0487	1	Keys 4,5,6,7,8,9

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7			Tube, Exhaust (Flexible) - Keys 2,3,8,9
	155-0727	1	Begin Spec G (1" x 36")
	155-0490	1	Specs A through F (3/4" x 36")
8	505-0051	1	Elbow, Street (3/4" x 90°) - Specs A through F
9	505-0332	1	Nipple, Pipe (3/4 x 3") - Specs A through F
10	505-0029	1	Coupling, Pipe (3/4") - Keys 2,3,8,9 - Specs A through F

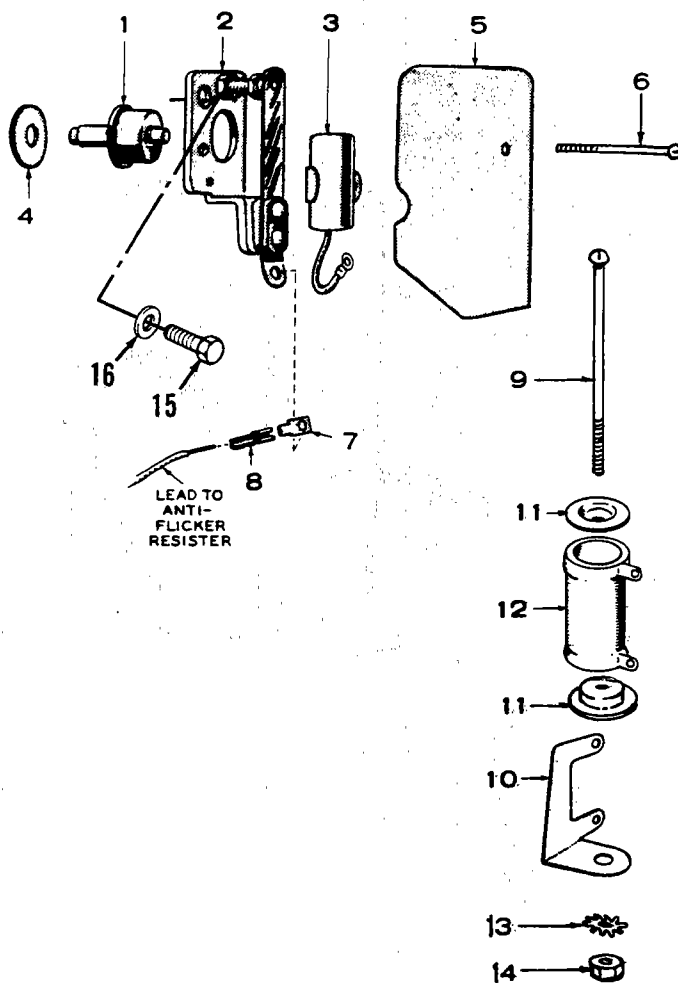
Air Housing



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-1016	1	Housing, Blower Begin Spec G
	134-1698	1	Begin Spec P
2	134-0519	1	Housing, Blower - Specs A through F
3			Bracket, Mounting - Blower Housing
	134-1014	1	Begin Spec G
	134-1697	1	Begin Spec P
4	134-1534	1	Shroud, Cylinder Air Begin Spec G
	134-0518	1	Specs A through F

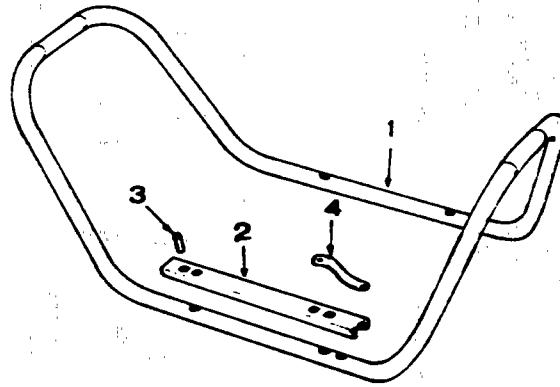
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
5	856-0003	2	Washer, Lock - Blower Housing - IET (#10)
6	815-0181	2	Screw, Hex Head - Blower Housing - ET (#10-32 x 1/2")
7	815-0290	1	Screw, Hex Washer Head - Blower Housing (1/4-20 x 5/8")
8	815-0333	2	Screw, Round Head Machine - Blower Bracket (#10-32 x 1/2")
9	856-0003	2	Washer, Lock - Blower Bracket - IET (#10)
10	815-0261	2	Screw, Hex Head - Cylinder Air Shroud (1/4-20 x 1/2")

Anti-Flicker - Keys 1,2



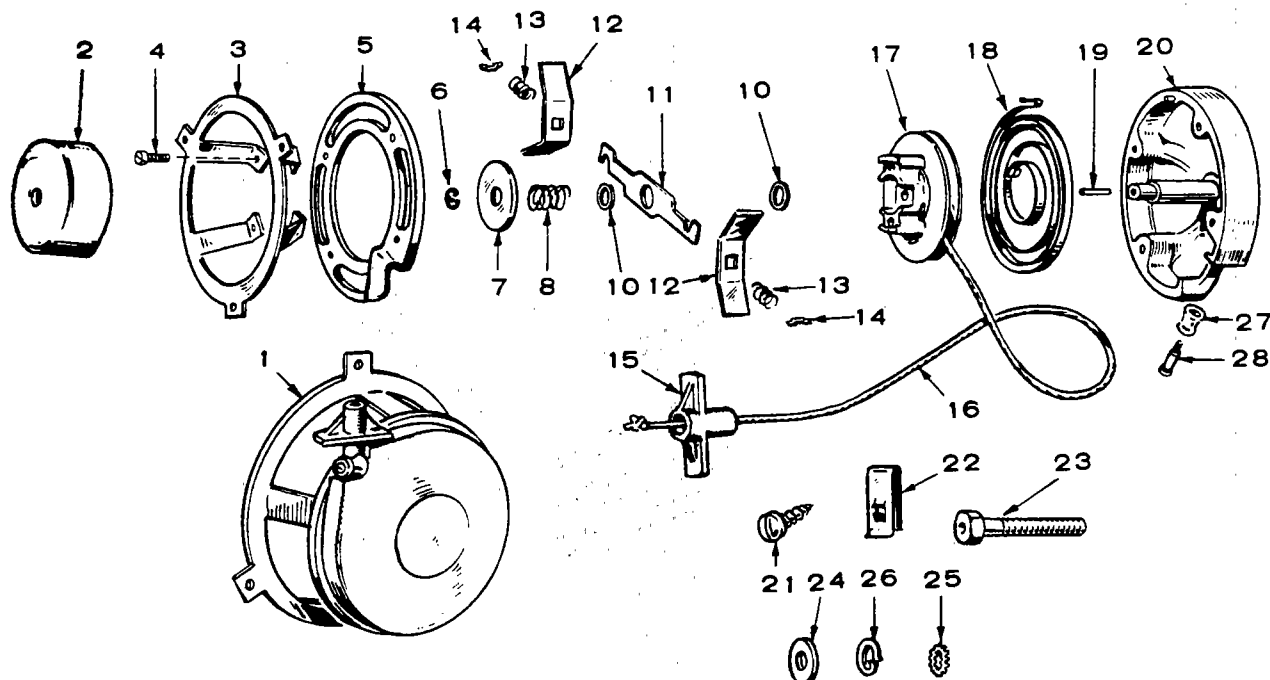
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	160-0447	1	Plunger Assembly (Includes Plunger, Guide and Diaphragm)				For 50 Hertz Sets
2	160-0478	1	Point Set	304-0047	1		Key 1 (120 Volt Output) -
3	312-0019	1	Condenser (0.5 Mfd.)				Begin Spec K
4	160-0461	1	Gasket, Plunger Guide	304-0011	1		Key 1 (240 Volt Output) -
5	166-0254	1	Cover, Contact Points				Begin Spec K
6	815-0187	1	Screw, Machine - Round Head (#10-32 x 1-1/4")	304-0120	1		Key 1 - Specs G through J
7	332-0527	1	Terminal, Solderless (Male)	304-0315	1		Key 1 - Specs A through F
8	332-0529	1	Terminal, Solderless (Female)	304-0120	1		Key 2 - Begin Spec G
9	813-0112	1	Screw, Machine - Round Head (#10-32 x 2-1/2")	304-0315	1		Key 2 - Specs A through F
10	304-0304	1	Bracket, Resistor Mounting	13	853-0008	1	Washer, Lock - ET (#10)
11	304-0014	2	Washer, Resistor Mounting	14	870-0053	1	Nut, Hex (#10-32)
12			Resistor, Fixed (Mounted in Generator)	15	800-0003	1	Screw, Cap - Hex Head (1/4-20 x 5/8")
			For 60 Hertz Sets	16	526-0063	1	Washer, Flat (1/4")
	304-0047	1	Key 1 (120 Volt Output) -				
			Begin Spec K				
	304-0011	1	Key 1 (240 Volt Output) -				
			Begin Spec K				
	304-0168	1	Key 1 - Specs G through J				
	304-0321	1	Key 1 - Specs A through F				
	304-0168	1	Key 2 - Begin Spec G				
	304-0321	1	Key 2 - Specs A through F				

Carrying Frame - Keys 5,7



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	403-0743	1	Frame Package, Carrying - One Piece Frame (Includes Mounting Cushions, Spacers Channels, Supports and Hardware) - Replaces two piece frames used Specs A through E) (29" Long)	1	403-0743	1	Frame Only, Carrying - one piece - Begin Spec F (29" Long)
				2	402-0170	2	Channel, Engine Mounting - Begin Spec F
				3	402-0171	4	Support, Engine Mounting - Begin Spec F
				4	337-0067	1	Strap, Ground

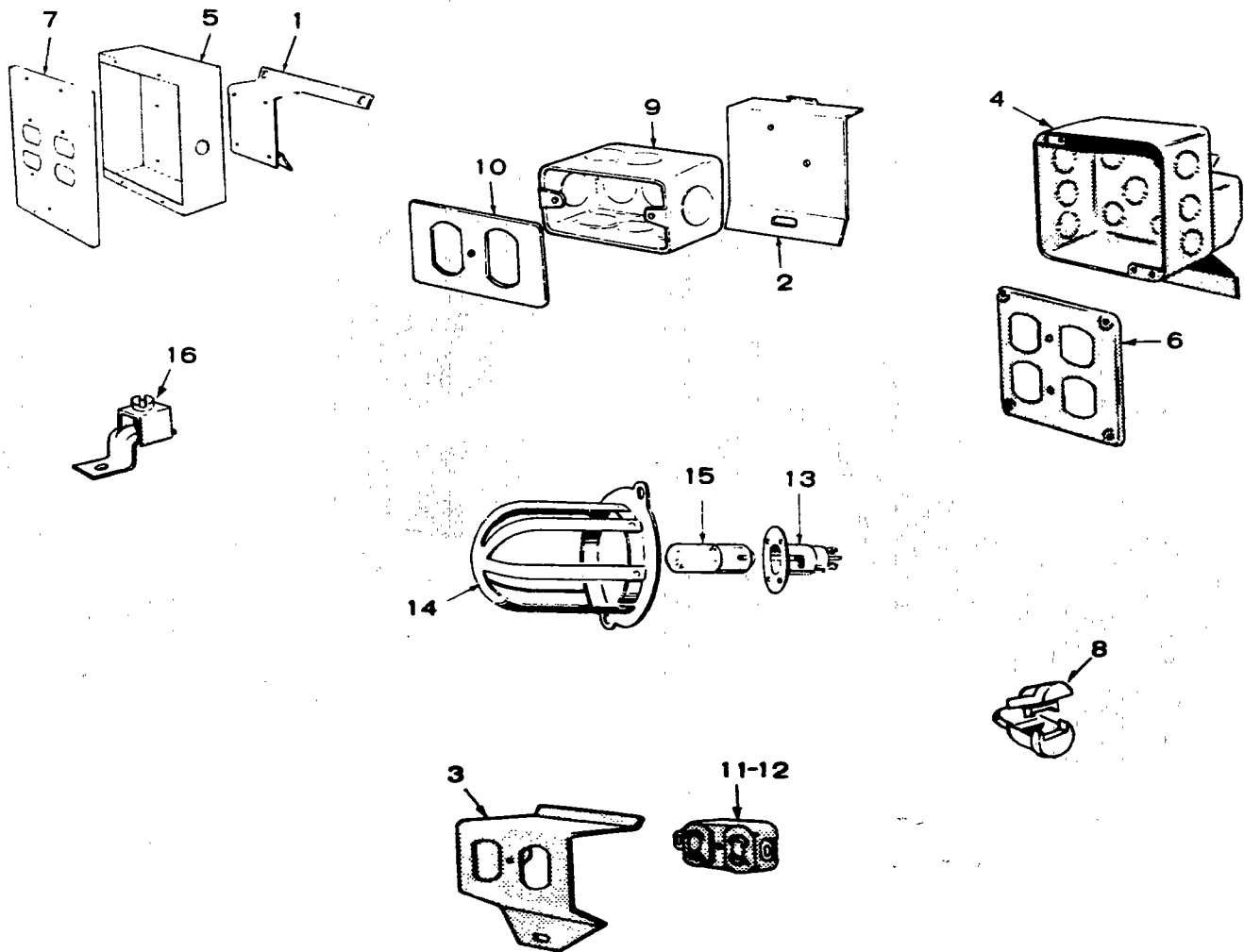
Readi-Pull Starter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Starter Kit (Complete) - Includes Cup and Mounting Ring
	192-0343	1	Begin Spec G (Obsoleted After April 1989)
	192-0270	1	Spec A through F
	192-0447	1	Begin Spec P
2			Cup, Starter Engaging
	192-0273	1	Spec A through N
	192-0364	1	Beginning Spec P
3			Ring, Adapter - Starter to Engine Housing
	192-0341	1	Begin Spec G
	192-0269	1	Spec A through F
4	815-0171	4	Screw, Tap - Pan Head (#10-24 x 5/8")
5	192-0274	1	Flange, Middle
6	518-0205	1	Ring, Retainer
7	526-0142	1	Washer, Brake Retainer (1/4 ID x 1-1/2 OD x 1/16" Thk)
8	192-0275	1	Spring, Brake
10	192-0279	2	Washer, Friction
11	192-0277	1	Lever, Brake
12	192-0278	2	Plate, Friction Shoe
13	192-0280	2	Spring, Friction Shoe

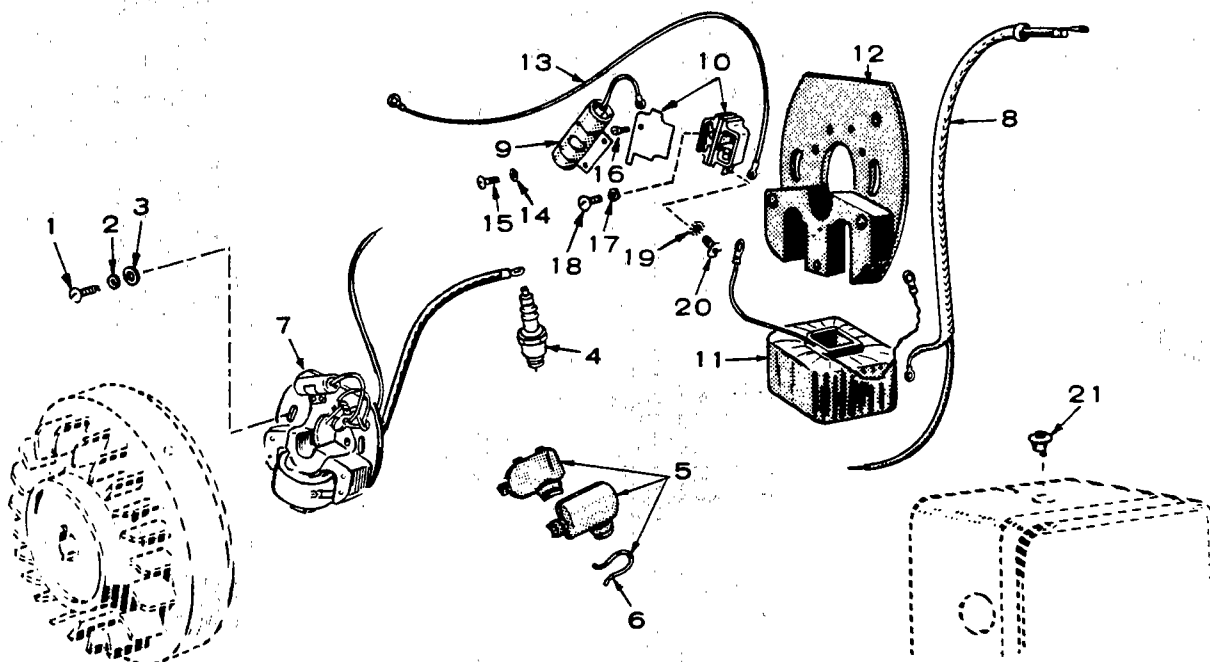
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
14	192-0281	2	Plate, Spring Retainer
15	192-0282	1	Handle (Includes Washer)
16	192-0283	1	Cord Only, Rewind Starter
17	192-0284	1	Rotor (Rope Sheave)
18	192-0285	1	Spring, Rewind
19	192-0287	1	Pin, Centering
20	192-0286	1	Cover, Starter
21	815-0179	4	Screw, Round Head (#10-32 x 3/8") Begin Spec G
21	809-0044	3	Screw, Sheet Metal (#10-32 x 1/2") Specs A through F
22	870-0119	3	Nut, Tinnerman (U-Type) - Spec A through F
23	104-0237	1	Screw, Cup Mounting (With Pilot) - Special
24	526-0141	1	Washer, Flat - Cup Mounting (15/32 ID x 1-1/4 OD x 1/8" Thk)
25	856-0003	4	Washer - Starter Ring to Engine Housing - Quantity of 3 used - Spec A through F (#10)
26	850-0055	1	Washer, Lock - Cup Mounting
27	192-0339	1	Roller, Rope
28	192-0340	1	Screw, Roller

Receptacles - Keys 1,4,5,6,7,10



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-1870	1	Bracket, Receptacle Box	11			Receptacle, Duplex (120 Volt)
	301-1372	1	Keys 4,5,6,7,10 - Begin Spec G		323-0383	1	- Parallel Blades
			Keys 4,5,6,7 - Specs C through F		323-0383	2	Key 1
2	301-1983	1	Bracket, Receptacle Box - Key 1 - Begin Spec G		323-0383	1	Key 4
3	301-1146	1	Bracket, Receptacle Mounting		323-0383	2	Begin Spec C
	301-1146	1	Key 1 - Specs A through F		323-0383	1	Specs A and B
4	330-0044	1	Box and Bracket, Receptacle - Keys 5 - Specs A and B		323-0383	2	Key 5,10
5			Box, Receptacle - Keys 4,5,6,7,10		323-0383	1	Keys 6,7
	330-0028	1	Begin Spec G	12			Receptacle, Duplex (240 Volt)
	301-1373	1	Specs C through F		323-0213	1	- Tandem Blades
6	330-0042	1	Cover, Receptacle Box		323-0213	2	Key 1
			Keys 4,5,6,7,10 - Begin Spec G		323-0213	1	Key 4
	330-0042	1	Key 5 - Specs A and B		323-0213	2	Begin Spec C
7	301-1392	1	Cover, Receptacle Box - Keys 4,5,6,7 - Specs C through F		323-0213	1	Specs A and B
			Keys 4,5,6,7 - Specs C through F		323-0213	2	Key 5
8	508-0098	1	Bushing, Insulator - Keys 1,4,5,6,7,10	13	322-0021	1	Keys 6,7
9	330-0005	1	Box, Receptacle - Key 1 - Begin Spec G				Receptacle, Pilot Light - Keys 4,5,6,7 - Specs C through F
10	330-0016	1	Cover, Receptacle Box - Key 1 - Begin Spec G	14	322-0022	1	Guard, Pilot Light - Keys 4,5,6,7 - Specs C through F
				15			Lamp, Pilot Light
					322-0059	1	Keys 4,5 - Specs C through F
					322-0011	1	240 Volt
					322-0011	1	120 Volt
				16	332-0142	1	Keys 6,7 - Specs C through F
							Terminal, Solderless - Ground

Ignition System (Magneto)



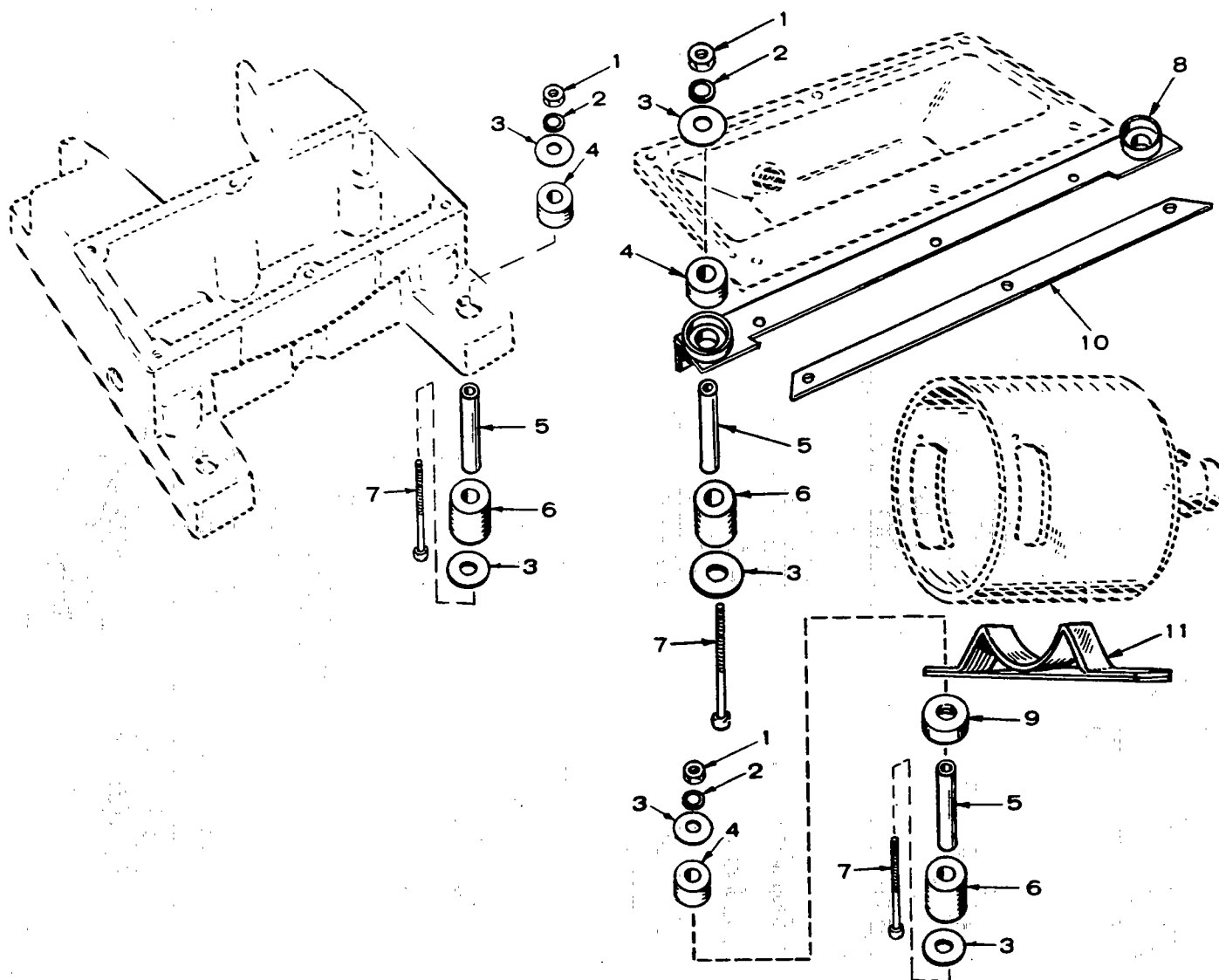
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0018	2	Screw, Self-Locking - Hex Washer Head (1/4-20 x 5/8")
2	526-0214	2	Washer, Flat (17/64" ID x 1/2" OD x 1/16" Thk)
3	850-0040	2	Washer, Lock - Spring (1/4")
4	167-0241	1	Plug, Spark Non-Resistor Type
	167-0237	1	Resistor Type
5	167-0067	1	Shield and Clamp, Spark Plug
6	167-0064	1	Clamp, Spark Plug Shield
7	160-0487	1	Backplate Assembly, Magneto (Includes Parts Marked *)
8	167-1272	1	*Cable, Spark Plug
9	312-0033	1	*Condenser
10	160-0540	1	*Point Set (Includes Parts Marked †)
11	160-0155	1	*Coil
12	160-0454	1	*Backplate and Poleshoe

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
13	336-0345	1	*Lead, Stop
14	854-0007	1	*Washer, Lock - IT (#8)
15	812-0075	1	*Screw, Machine - Round Head (#8-32 x 1/4")
16	815-0122	1	*†Screw, Cap - Hex Head (#6-32 x 1/2")
17	850-0025	1	*†Washer, Lock - Spring (#8)
18	812-0077	1	*†Screw, Machine - Round Head (#8-32 x 3/8")
19	853-0003	1	*†Washer, Lock - ET (#6)
20	812-0059	1	*†Screw, Machine - Round Head (#6-32 x 1/4")
21			Switch, Stop
	313-0018	1	Keys 1,4,5,6,7,10
	313-0034	1	Key 3

* - Parts Included in 160-0487 Backplate Assembly.

† - Parts Included in 160-0540 Point Set.

Mounting Hardware

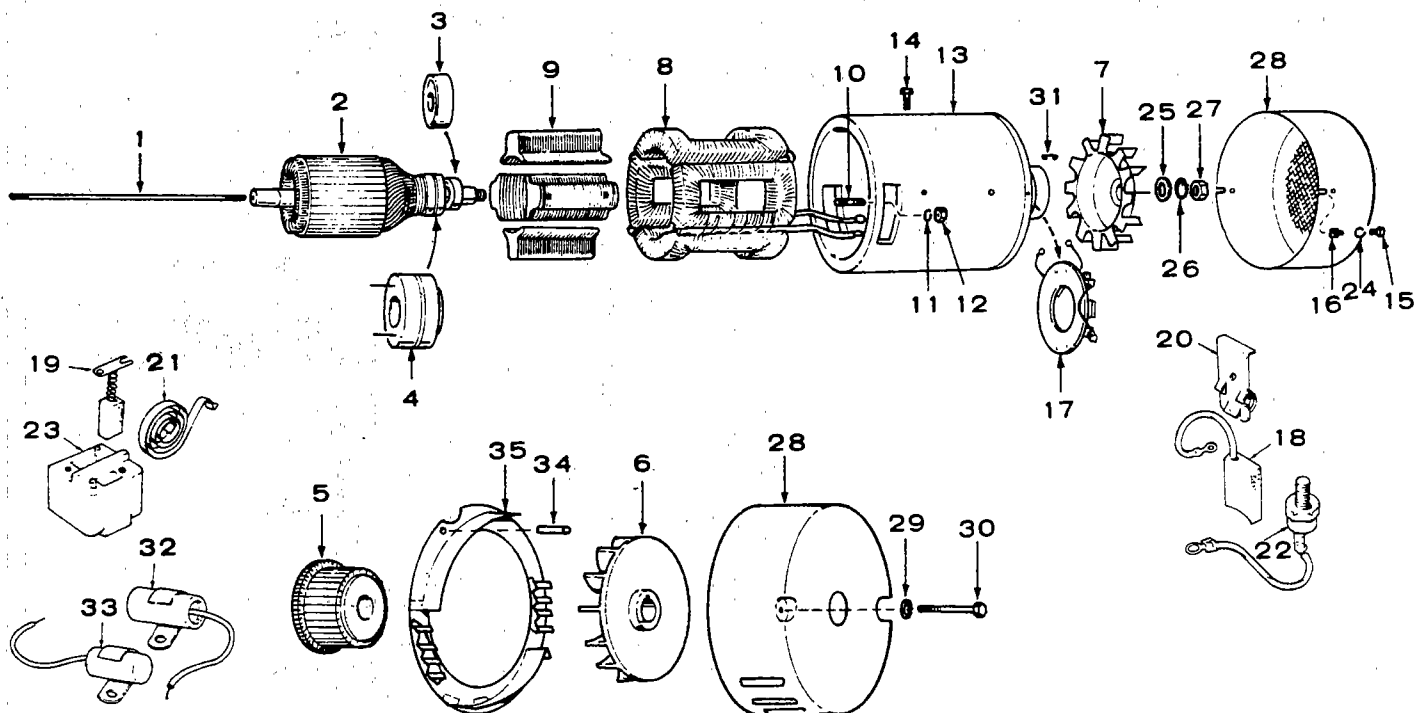


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	402-0229	4	Cushion Package - Keys 1,2,3,4,6,8,9,10 (Includes Parts Marked *)
1	862-0015	4	*Nut, Hex (5/16-18)
2	850-0046	4	*Washer, Lock - Spring (5/16")
3	526-0041	8	*Washer, Flat (21/64" ID x 1" OD x 1/16" Thk)
4	402-0076	4	Cushion, Upper
	402-0044	4	* Keys 1,2,3,4,6,8,9,10 - Begin Spec F
	402-0076	4	Keys 1,2,3,4,6 - Specs A through E
5	402-0141	4	Keys 5 and 7
	402-0048	4	Bushing, Cushion Spacing
	402-0142	2	* Keys 1,2,3,4,6,8,9,10 - Begin Spec F
	402-0141	4	Keys 1,2,3,4,6,8,9,10 - Specs A through E
	402-0142	2	Keys 5 and 7 (Engine End)
	402-0141	2	Keys 5 and 7 (Generator End)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	402-0045	4	Cushion, Lower
	402-0144	2	* Keys 1,2,3,4,6,8,9,10
	402-0045	2	Keys 5 and 7 (Engine End)
7	816-0114	2	Keys 5 and 7 (Generator End)
	816-0111	4	Bolt, Carriage
	816-0110	2	* Keys 1,2,3,4,6,8,9,10 (5/16-18 x 4-1/2")
8	403-0381	2	Keys 5 and 7 - Engine End (5/16-18 x 3-3/4")
9	402-0140	2	Keys 5 and 7 - Generator End (5/16-18 x 3-1/2")
10	102-0689	1	Bracket, Engine Mounting - Keys 5 and 7
11	232-1282	2	Cup, Centering - Keys 5 and 7
		1	Stiffener, Oil Pan - Keys 5 and 7
		1	Bracket, Generator Mounting - Keys 5 and 7

* - Parts included in 402-0229 Cushion Package.

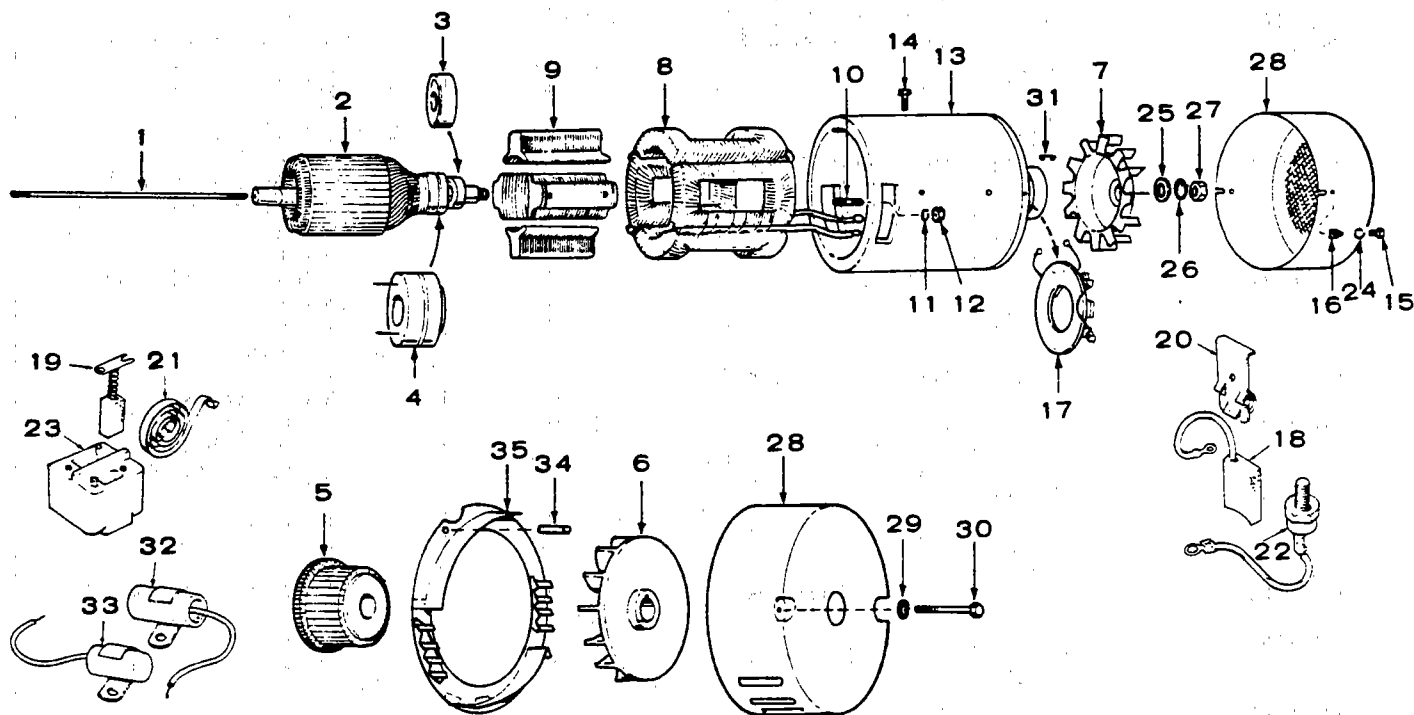
Generator (Four Pole Type) - Keys 1,2,3,10



Generator (Four Pole Type) - Keys 1,2,3,10

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Stud, Armature	5			Commutator
			Keys 1,2	203-0059	1	@	Keys 1,2 - Specs A through J
	520-0056	1	Begin Spec G	203-0053	1	#	Key 3 - Begin Spec K
	520-0274	1	Specs A through F	203-0111	1	\$	Key 3 (24 Volt) - Specs A through J
			Key 3	203-0112	1	\$	Key 3 (32 Volt) - Specs A through J
	520-0279	1	24 Volt-Begin Spec H	203-0049	1	#	Key 10
	520-0275	1	24 Volt-Specs A through G	6			Blower, Generator Cooling
	520-0279	1	32 Volt-Begin Spec G	205-0047	1	*	Keys 1,2 - Specs A through F
	520-0275	1	32 Volt-Specs A through F	205-0047	1	\$	Key 3 (24 Volt) - Specs A through G
	520-0056	1	Key 10	205-0047	1	\$	Key 3 (32 Volt) - Specs A through F
2			Armature Assembly	7			Blower, Generator Cooling
			Keys 1,2	205-0056	1		Keys 1,2 - Begin Spec G
			120 Volt, 60 Hertz	205-0056	1		Key 3 (24 Volt) - Begin Spec H
	201-1512	1	Begin Spec K (Includes Parts Marked †)	205-0056	1		Key 3 (32 Volt) - Begin Spec G
	201-1072	1	Specs G through J (Includes Parts Marked @)	8			Coil Assembly, Field
	201-0677	1	Specs A through F (Includes Parts Marked *)				Key 1
			240 Volt, 60 Hertz	222-1689	1		Begin Spec K (120 Volt)
	201-1513	1	Begin Spec K (Includes Parts Marked †)	222-1690	1		Begin Spec K (240 Volt)
	201-1073	1	Specs G through J (Includes Parts Marked @)	222-1574	1		Specs G through J
	201-0721	1	Specs A through F (Includes Parts Marked *)	222-1407	1		Specs A through F
			120 Volt, 50 Hertz	222-1573	1		Key 2
	201-1525	1	Begin Spec K (Includes Parts Marked †)	222-1400	1		Begin Spec G
	201-1190	1	Specs G through J (Includes Parts Marked @)	222-1605	1		Specs A through F
	201-0688	1	Specs A through F (Includes Parts Marked *)	222-1592	1		Key 3
			240 Volt, 50 Hertz	222-1411	1		24 Volt-Begin Spec H
	201-1526	1	Begin Spec K (Includes Parts Marked †)	222-1583	1		24 Volt-Specs A through G
	201-1071	1	Specs G through J (Includes Parts Marked @)	9			32 Volt
	201-0798	1	Specs A through F (Includes Parts Marked *)	221-0110	4		Key 10
			Key 3	221-0114	4		Shoe, Pole
			24 Volt	221-0125	4		Key 1,2
	201-1189	1	Begin Spec H (Includes Parts Marked #)	10	520-0363	2	Key 3
	201-1109	1	Specs A through G (Includes Parts Marked \$)	11	850-0040	2	Stud, Frame to Engine (1/4 x 1-9/16")
			32 Volt	12	115-0025	2	Washer, Lock - Spring (1/4")
	201-1093	1	Begin Spec G (Includes Parts Marked #)	13			Nut, Hex (Special)
	201-0693	1	Specs A through F (Includes Parts Marked \$)				Frame (Machined and Drilled for Coils and Pole Shoes)
	201-1075	1	Key 10 (Includes Parts Marked #)	210-1739	1		Key 1 and 2
3	510-0047	1	†@*#\$ Bearing, Ball	210-1593	1		Begin Spec G
4			Ring, Collector	210-1449	1		Spec E
	204-0097	1	† Keys 1,2 - Begin Spec K				Specs A through D
	204-0087	1	@* Key 1,2 - Specs A through J	210-1638	1		Key 3
				210-0349	1		24 Volt-Begin Spec H
				210-1638	1		24 Volt-Specs A through G
				210-0279	1		32 Volt-Begin Spec G
				210-0240	1		32 Volt-Specs E and F
				210-1717	1		32 Volt-Specs A through D
				14	800-0030	8	Key 10
				15			Screw, Cap - Hex Head (5/16-18 x 1-1/4")
				815-0181	2		Screw, Cap - Hex Head
				815-0179	2		Keys 1,2 - Begin Spec G (#10-32 x 1/2")
				815-0179	2		Keys 1,2 - Specs E and F (#10-32 x 1/2")
				815-0179	2		Key 3 (24 Volt) (#10-32 x 3/8")
				815-0179	2		Key 3 (32 Volt) Begin Spec E (#10-32 x 3/8")
				815-0181	2		Key 10 (#10-32 x 1/2")

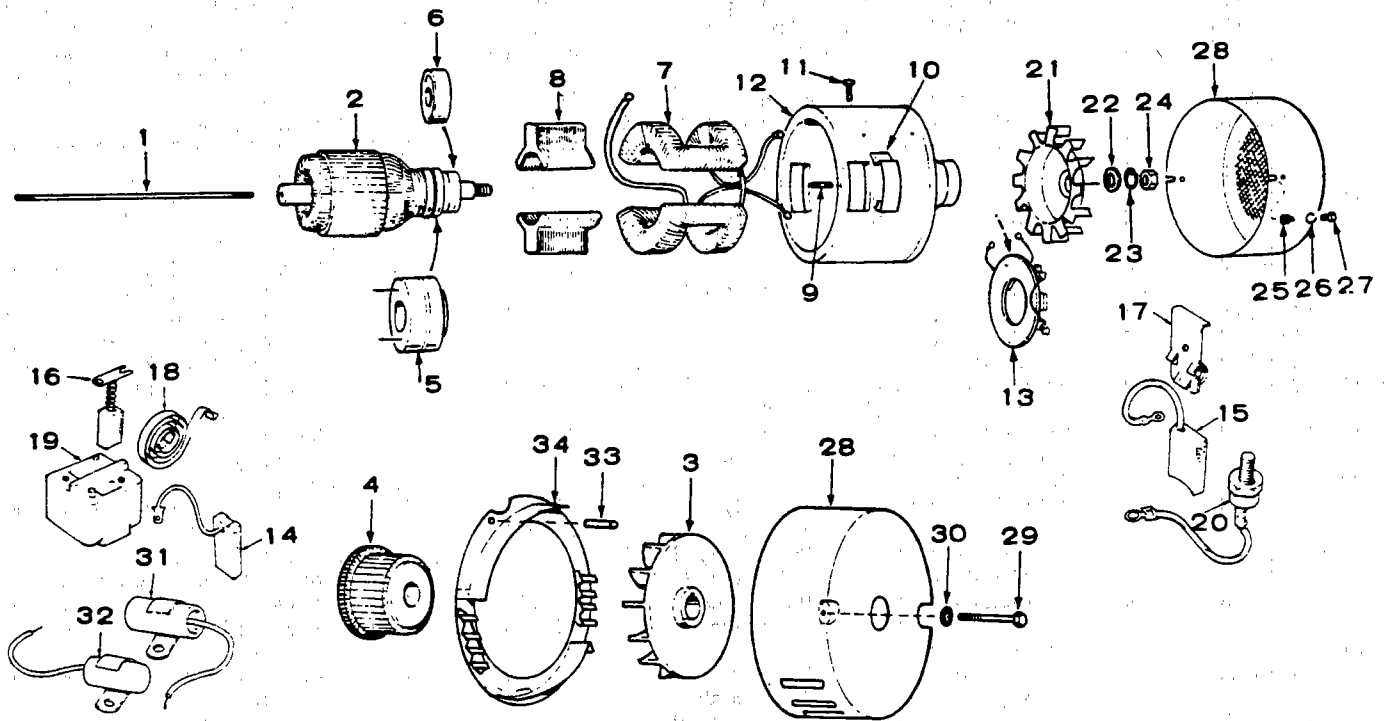
Generator (Four Pole Type) - Keys 1,2,3,10



Generator (Four Pole Type) - Keys 1,2,3,10

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
16	232-1557	2	Clip, End Cover - Hold-down	25	526-0029	1	Washer, Flat (25/64" ID x 7/8" OD x 1/16" Thk)
	232-1557	2	Keys 1,2 - Begin Spec G	26	850-0050	1	Washer, Lock - Spring (3/8")
	232-1557	2	Key 3 (24 Volt) - Begin Spec H	27	104-0091	1	Nut, Hex (Special)
	232-1557	2	Key 3 (32 Volt) - Begin Spec G	28			Cover, Generator End
	232-1557	2	Key 10		234-0127	1	Keys 1,2
17			Rig Assembly, Brush (Includes Brushes, Springs, Holders and Rectifiers)		234-0125	1	Begin Spec G
	212-0292	1	Keys 1,2		232-1214	1	Specs E and F
	212-0305	1	120 Volt - Begin Spec K				Specs A through D
	212-0209	1	240 Volt - Begin Spec K		234-0127	1	Key 3
			Specs A through J		234-0125	1	24 Volt-Begin Spec H
	212-0251	1	Key 3		234-0127	1	24 Volt-Specs A through G
	212-0378	1	24 Volt-Begin Spec H		234-0125	1	32 Volt-Begin Spec G
	212-0251	1	24 Volt-Specs A through G		232-1214	1	32 Volt-Specs E and F
	212-0221	1	32 Volt-Begin Spec G		234-0127	1	32 Volt-Specs A through D
	212-0221	1	32 Volt-Specs A through F	29			Key 10
18			Brush, Commutator (DC)		850-0040	2	Washer, Lock - Spring
	214-0041	4	Keys 1,2 - Specs A through J				Keys 1,2 - Specs A through D (1/4")
			Key 3		850-0040	2	Key 3 (32 Volt) - Specs A through D (1/4")
	214-0009	4	24 Volt-Begin Spec H	30			Screw, Cap - Hex Head
	214-0047	4	24 Volt-Specs A through G		800-0016	2	Keys 1,2 - Specs A through D (1/4-20 x 3-1/4")
	214-0009	4	32 Volt-Begin Spec G		800-0016	2	Key 3 (32 Volt) - Specs A through D (1/4-20 x 3-1/4")
	214-0047	4	32 Volt-Specs A through F				Clip, Armature Bearing Stop
	214-0039	4	Key 10	31			Key 3 (24 Volt) - Specs A through G
18	214-0072	2	Brush, Collector Ring (AC) - Keys 1,2 - Begin Spec K		232-0596	1	Key 3 (32 Volt) - Specs A through F
19	214-0059	4	Brush, Collector Ring (AC) - Keys 1,2 - Specs A through J		232-0596	1	Condenser, 0.5 Mfd.
20			Spring, Brush	32			Keys 1,2 - Specs A through J
	212-1105	2	Collector Ring Brush (AC) - Keys 1,2 - Begin Spec K		312-0017	1	Keys 3,10
	212-1106	4	Commutator Brush (DC) - Key 3 (24 Volt) Specs A through G	33	312-0017	1	Condenser, 0.1 Mfd. - Keys 1,2
	212-1106	4	Commutator Brush (DC) - Key 3 (32 Volt) Specs A through F	34	312-0058	1	Spacer, Scroll Mounting
21			Spring, Brush		232-1197	2	Keys 1,2 - Specs A through F
	212-1003	4	Commutator Brush (DC) - Keys 1,2 - Specs A through J		232-1197	2	Key 3 (24 Volt) - Specs A through G
	212-1003	4	Commutator Brush (DC) - Key 3 (24 Volt) Begin Spec H		232-1197	2	Key 3 (32 Volt) - Specs A through F
	212-1003	4	Commutator Brush (DC) - Key 3 (32 Volt) Begin Spec G	35			Scroll, Air
	212-1003	4	Commutator Brush (DC) - Key 10		234-0007	1	Keys 1,2 - Specs A through F
22			Rectifier - Keys 1,2 - Begin Spec K		234-0007	1	Key 3 (24 Volt) - Specs A through G
	305-0473	1	120 Volt		234-0007	1	Key 3 (32 Volt) - Specs A through F
	305-0474	1	240 Volt	†			Included in 201-1512, 201-1513, 201-1525, 201-1526 Armature Assembly.
23	212-1064	2	Guide, Brush - Keys 1,2 - Specs A through J	@			Included in 201-1071, 201-1072, 201-1073, 201-1190 Armature Assembly.
24			Washer, Lock - Spring (#10)	*			Included in 201-0677, 201-0688, 201-0721, 201-0798 Armature Assembly.
	850-0030	2	Keys 1,2 - Specs E and F	#			Included in 201-1075, 201-1093, 201-1189 Armature Assembly.
	850-0030	2	Key 3	§			Included in 201-0693, 201-1109 Armature Assembly.
	850-0030	2	24 Volt-Specs A through G				
	850-0030	2	32 Volt-Specs E and F				

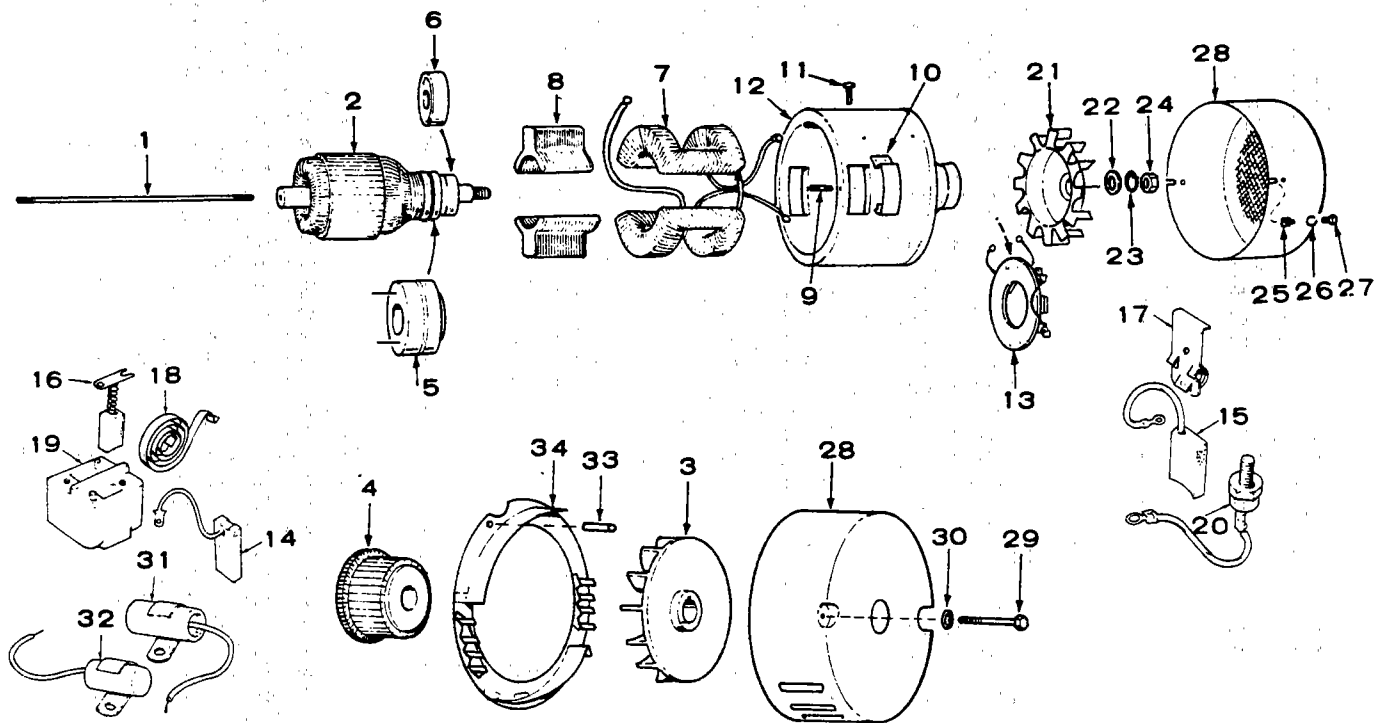
Generator (Two Pole Type) - Keys 4,5,6,7,8,9



Generator (Two Pole Type) - Keys 4,5,6,7,8,9

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Stud, Armature Through Keys 4,5				Key 9
	520-0056	1	Begin Spec B				Begin Spec H (Includes Bearing, Collector Ring and Commutator)
	520-0280	1	Spec A				50 Hertz
	520-0536	1	Keys 6,7	201-1191	1		60 Hertz
	520-0285	1	Key 8	201-1140	1		Specs A through G (Includes Bearing, Collector Ring and Commutator)
	520-0563	1	Key 9				50 Hertz
2			Armature Assembly Keys 4,5				60 Hertz
			Begin Spec H (Includes Bearing and Collector Ring)	201-1100	1		
			120 Volt, 50 Hertz	201-1043	1		
201-1343	1		120 Volt, 60 Hertz	3 205-0047	1		Blower, Cooling - Keys 4,5 - Spec A
201-1346	1		240 Volt, 50 Hertz				Commutator
201-1344	1		240 Volt, 60 Hertz	4 203-0117	1		Keys 4,5,6,7 - Specs A through G
201-1347	1		Specs B through G (Includes Bearing, Collector Ring and Commutator)	203-0133	1		Keys 8,9
			120 Volt, 50 Hertz	5			Ring, Collector Keys 4,5
201-0811	1		120 Volt, 60 Hertz	204-0097	1		Begin Spec H
201-0800	1		240 Volt, 50 Hertz	204-0087	1		Specs A through G
201-0812	1		240 Volt, 60 Hertz	204-0101	1		Keys 6,7
201-0810	1		Spec A (Includes Bearing, Collector Ring, Commutator and Blower)	204-0089	1		Begin Spec H
			120 Volt, 50 Hertz	204-0087	1		Specs A through G
201-0799	1		120 Volt, 60 Hertz	204-0089	1		Key 8
201-0679	1		240 Volt, 50 Hertz	6 510-0047	1		Key 9
201-0795	1		240 Volt, 60 Hertz	7			Bearing, Ball Coil Assembly, Field (2 Coils Wired Together)
201-0753	1		Keys 6,7				Keys 4,5 - Begin Spec H
			Begin Spec H (Includes Bearing and Collector Ring)	222-1643	1		120 Volt
			50 Hertz	222-1644	1		240 Volt
201-1364	1		60 Hertz	222-1643	1		Keys 6,7 - Begin Spec H
201-1348	1		Specs A through G (Includes Bearing, Collector Ring and Commutator)	222-1419	1		Keys 4,5,6,7 - Specs A through G
			50 Hertz				Keys 8,9
			60 Hertz	222-1598	1		Begin Spec H
201-0853	1		Key 8	222-1561	1		Specs A through G
201-0829	1		Begin Spec H (Includes Bearing, Collector Ring and Commutator)	8 221-0112	2		Shoe, Pole
			120 Volt, 50 Hertz	221-0135	2		Keys 4,5,6,7
201-1164	1		120 Volt, 60 Hertz				Keys 8,9
201-1141	1		240 Volt, 50 Hertz	9 520-0363	2		Stud, Frame to Engine
201-1180	1		240 Volt, 60 Hertz	520-0363	4		Keys 4,5,6,7 (1/4 x 1-9/16") Keys 8,9 (1/4 x 1-9/16")
201-1224	1		Specs A through G (Includes Bearing, Collector Ring and Commutator)	10 234-0169	2		Cover, Generator Air Opening
			120 Volt, 50 Hertz				Keys 4,5,6,7
201-1137	1		120 Volt, 60 Hertz	234-0119	2		Keys 8,9
201-1044	1		240 Volt, 50 Hertz	234-0124	2		Begin Spec G
201-1106	1		240 Volt, 60 Hertz	11 102-0455	4		Specs A through F
201-1117	1						Screw, Cap - Hex Head (Special)

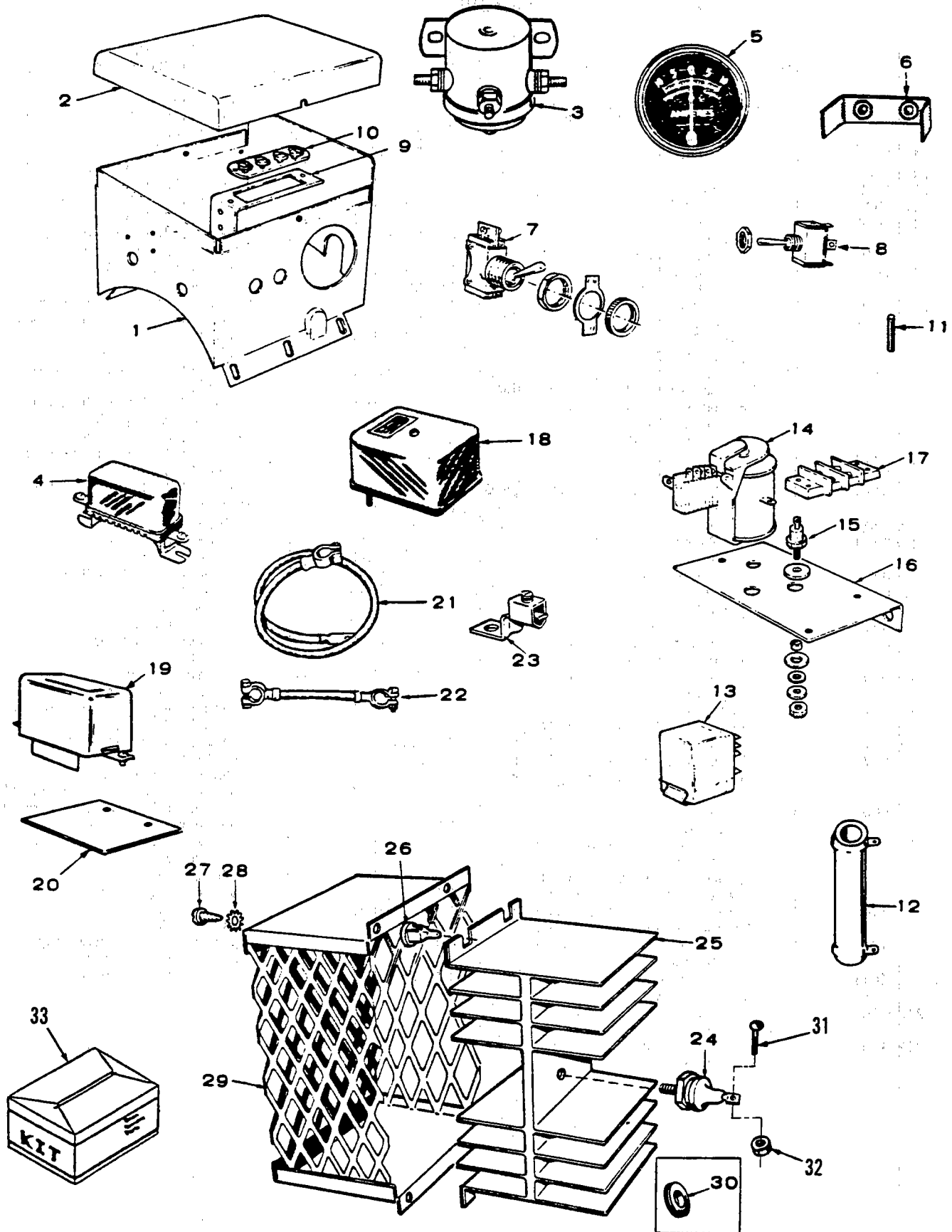
Generator (Two Pole Type) - Keys 4,5,6,7,8,9



Generator (Two Pole Type) - Keys 4,5,6,7,8,9

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
12			Frame (Machined and Drilled for Coils and Pole Shoes)	20			Rectifier
			Keys 4,5				Keys 4,5 - Begin Spec H
	210-1716	1	Begin Spec G		305-0473	2	120 Volt
	210-1562	1	Spec E and F		305-0474	2	240 Volt
	210-1532	1	Specs C and D		305-0473	2	Keys 6,7 - Begin Spec H
	210-1532	1	Spec B	21	205-0056	1	Blower, Cooling
	210-1464	1	Spec A		205-0056	1	Keys 4,5 - Begin Spec B
			Keys 6,7		526-0029	1	Keys 6,7,8,9
	210-1718	1	Begin Spec G	22			Washer, Flat (25/64" ID x 7/8" OD x 1/16" Thk)
	210-1543	1	Specs A through F	23	850-0050	1	Washer, Lock - Spring (3/8")
			Key 8	24	104-0091	1	Nut, Hex (Special)
	210-1719	1	Begin Spec G	25			Clip, End Cover Mounting
	210-1704	1	Specs A through F		232-1557	2	Keys 4,5,6,7 - Begin Spec G
			Key 9		232-1557	2	Keys 8,9
	210-1720	1	Begin Spec G	26			Washer, Lock - Spring
	210-1701	1	Specs A through F		850-0025	2	Keys 4,5 - Specs E and F (#10)
13			Rig Assembly, Brush (Includes Brushes, Springs, Holders and Rectifiers)		850-0025	2	Keys 6,7,8,9 - Specs A through F (#10)
			Keys 4,5 - Begin Spec H	27			Screw, Cap - Hex Head
	212-0292	1	120 Volt		815-0181	2	Keys 4,5 - Begin Spec E (#10-32 x 1/2")
	212-0305	1	240 Volt		815-0181	2	Keys 6,7,8,9 (#10-32 x 1/2")
	212-0215	1	Keys 4,5 - Specs A through G	28			Cover, End
			Keys 6,7				Keys 4,5
	212-0401	1	Begin Spec H		234-0127	1	Begin Spec G
	212-0230	1	Specs A through G		234-0127	1	Specs E and F
			Key 8		234-0004	1	Specs B through D
	212-0277	1	Begin Spec H		232-1214	1	Spec A
	212-0277	1	Specs A through G				Keys 6,7,9
			Key 9		234-0129	1	Begin Spec G
	212-0273	1	Begin Spec H		234-0129	1	Specs A through F
	212-0261	1	Specs A through G				Key 8
14			Brush, Commutator (DC)		234-0127	1	Begin Spec G
	214-0001	2	Keys 4,5,6,7 - Specs A through G		234-0127	1	Specs A through F
	214-0070	2	Keys 8,9		234-0497	1	Begin Spec N - 50 Hertz only (Key 8)
15			Brush, Collector Ring (AC)	29	800-0016	2	Screw, Cap - Hex Head (1/4-20 x 3-1/4") - Keys 4,5 (Specs A through D)
	214-0072	2	Keys 4,5,8 - Begin Spec H				Washer, Lock - Spring (1/4") - Keys 4,5 (Specs A through D)
	214-0072	3	Keys 6,7,9 - Begin Spec H	30	850-0040	2	Condenser (0.5 Mfd.)
16			Brush and Spring, Collector Ring (AC)		312-0017	1	Keys 4,5,6,7 - Specs A through G
	214-0059	4	Keys 4,5,8 - Specs A through G		312-0017	1	Keys 8,9
	214-0059	6	Keys 6,7,9 - Specs A through G	32			Condenser (0.1 Mfd.)
17			Spring, Collector Ring Brush		312-0058	1	Keys 4,5,8
	212-1105	2	Keys 4,5,8 - Begin Spec H		312-0058	2	Keys 6,7,9
	212-1105	3	Keys 6,7,9 - Begin Spec H	33	232-1197	2	Spacer, Scroll Mounting - Keys 4,5 - Spec A
18			Spring, Commutator Brush		234-0007	1	Scroll, Air - Keys 4,5 - Spec A
	212-1003	2	Keys 4,5,6,7 - Specs A through G				
	212-1011	2	Keys 8,9				
19			Guide, Brush				
	212-1064	2	Keys 4,5,8 - Specs A through G				
	212-1162	2	Keys 6,7,9 - Specs A through G				

Control - Keys 2,3,8,9



Control - Keys 2,3,8,9

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Box, Control	13	307-0642	1	*Relay, Start - Disconnect -
			Key 2				Keys 8,9 - Begin Spec H
	301-4660	1	Begin Spec G	14	306-0028	1	Relay, Start - Disconnect -
	301-1059	1	Specs A through F				Keys 8,9 - Specs A through G
			Key 3				(Replaced by 307-0642)
	301-3408	1	Begin Spec L	15	305-0235	1	Rectifier (10 Amp, 100 Volt
	301-3408	1	24 Volt-Specs A through K				Peak) - Keys 8,9 - Specs A
	301-1868	1	32 Volt-Specs G through K				through G
	301-1128	1	32 Volt-Spec F	16	301-1829	1	Bracket, Relay and Rectifier -
	301-1127	1	32 Volt-Specs A through E				Keys 8,9 - Specs A through G
			Keys 8,9	17	332-0609	1	Block, Terminal (2 Place) -
	301-4659	1	Begin Spec H				Keys 8,9 - Specs A through G
	301-4659	1	Spec G	18			Relay, Reverse Current - Key 3
	301-1823	1	Specs A through F		307-0112	1	24 Volt, Specs A through K
2			Cover, Control Box - Keys		307-0185	1	32 Volt, Specs A through E
			2,3,8,9	19	307-0496	1	Relay, Reverse Current -
			Begin Spec G				Key 3 - 32 Volt - Specs F
	301-1858	1	Specs A through F				through K
	301-1060	1					
3			Switch, Start Solenoid	20	301-0592	1	Insulator, Reverse Current
			Keys 2,8,9				Relay - Key 3 - 32 Volt -
	307-1046	1	Key 3				Specs F through K
4	307-0061	1		21	416-0077	2	Cable, Battery (28") -
5	307-0180	1	Relay, Reverse Current				Keys 2,8,9
			Ammeter, Charge (Includes	22	416-0133	1	Cable, Battery Jumper (6-3/4")
			Bracket) (Kit)				- Keys 2,8,9
	302-1360	1	Key 2	23	332-0142	1	Terminal, Solderless - Ground
			Key 3	24	358-0038	1	Diode, Key 3 - Begin Spec L
	302-1364	1	24 Volt	25	363-0057	1	Sink, Heat - Key 3 - Begin
	302-1363	1	32 Volt				Spec L
6	302-0270	1	Bracket, Ammeter - Keys 2,3	26	870-0196	4	Nut, Insulating - Key 3 -
7	308-0002	1	Switch, Charge Rate (Hi-Lo) -				Begin Spec L
			Key 2	27	809-0035	4	Screw, Round Head Tapping
8			Switch, Start-Stop				(#8 x 3/4") - Key 3 - Begin
			Keys 2,8,9				Spec L
	308-0154	1	Begin Spec G	28	853-0005	4	Washer, Lock - ET (#8)
	308-0166	1	Specs A through F	29	301-3395	1	Box, Heat Sink Mounting -
			Key 3				Key 3 - Begin Spec L
	308-0155	1	Begin Spec G	30	508-0109	1	Grommet, Diode Leads - Key 3
	308-0029	1	Specs A through F				- Begin Spec L (11/16 ID x
9	332-0198	1	Bracket, Terminal Block -				1-5/16" OD)
			Keys 2,3,8,9	31	812-0076	1	Screw, Machined - Round Head
10	332-0222	1	Block, Terminal - Keys 2,3,8,9				(#8-32 x 1/4")
11	332-0125	1	Stud, Brass - Key 3	32	870-0221	1	Nut, Hex - External Tooth
12			Resistor, Charge				(#8-32)
			Key 2 - Adjustable	33	307-1978	1	Relay Kit (Includes Parts
	304-0268	1	Begin Spec G (5-Ohm,				Marked *)
			50 Watt)				
	304-0066	1	Specs A through F (10-Ohm,				
			50 Watt)				
			Keys 8,9 - Fixed				
	304-0046	1	Begin Spec H (10-Ohm,				
			50 Watt)				
	304-0002	1	Specs A through G (15-Ohm,				
			50 Watt)				

* - Part Included in 307-1978 Relay Kit.

Service Kits and Miscellaneous

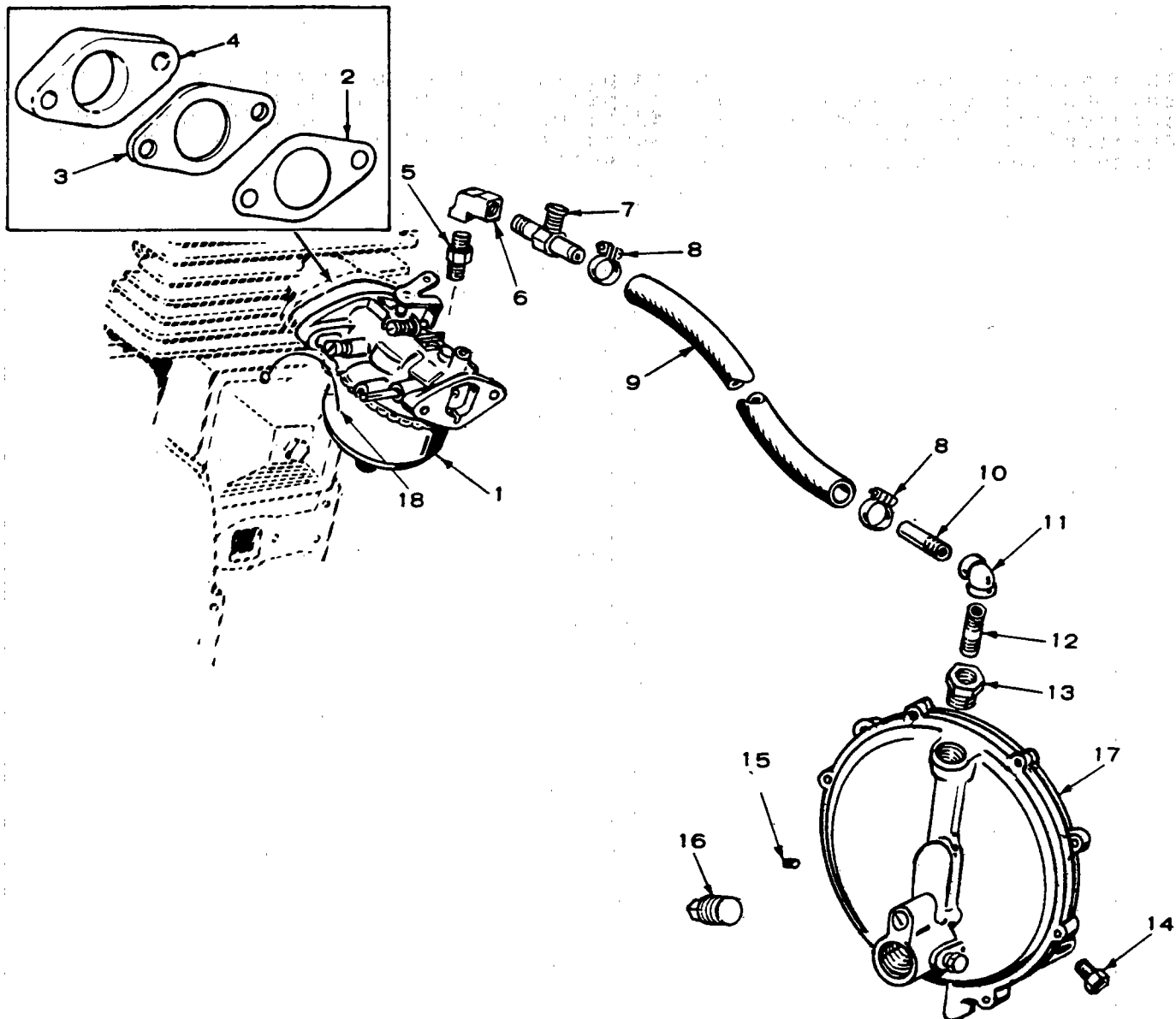
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	98-1100	1	Decal Kit		412-0004	1	Cover, Canvas, Weatherproof (Accessory)
	168-0062	1	Gasket Kit, Generator Set		333-0124	1	Cold Weather Heater Kit (300 Watt, 120 Volt) - Mounts on Cylinder Head Under Shroud
	522-0232	1	Overhaul Kit, Generator Set				
	522-0215	1	Begin Spec K		405-2243	1	Housing Kit, Generator Set
		1	Spec A through J				
			Touch-Up Paint (Pressurized Can) - (13 oz.)				
	525-0137	1	Metallic Green				
	525-0305	1	Non-Metallic Green				

NOTE: For other kits, refer to the group for the part in question.

OPTIONAL EQUIPMENT PARTS SECTION

This section contains illustrated parts listing of factory installed options for the generator sets. Options may not be applicable to all models; for field conversions additional parts are usually required. Optional parts listed in this section are in addition or in place of those shown in the standard parts section.

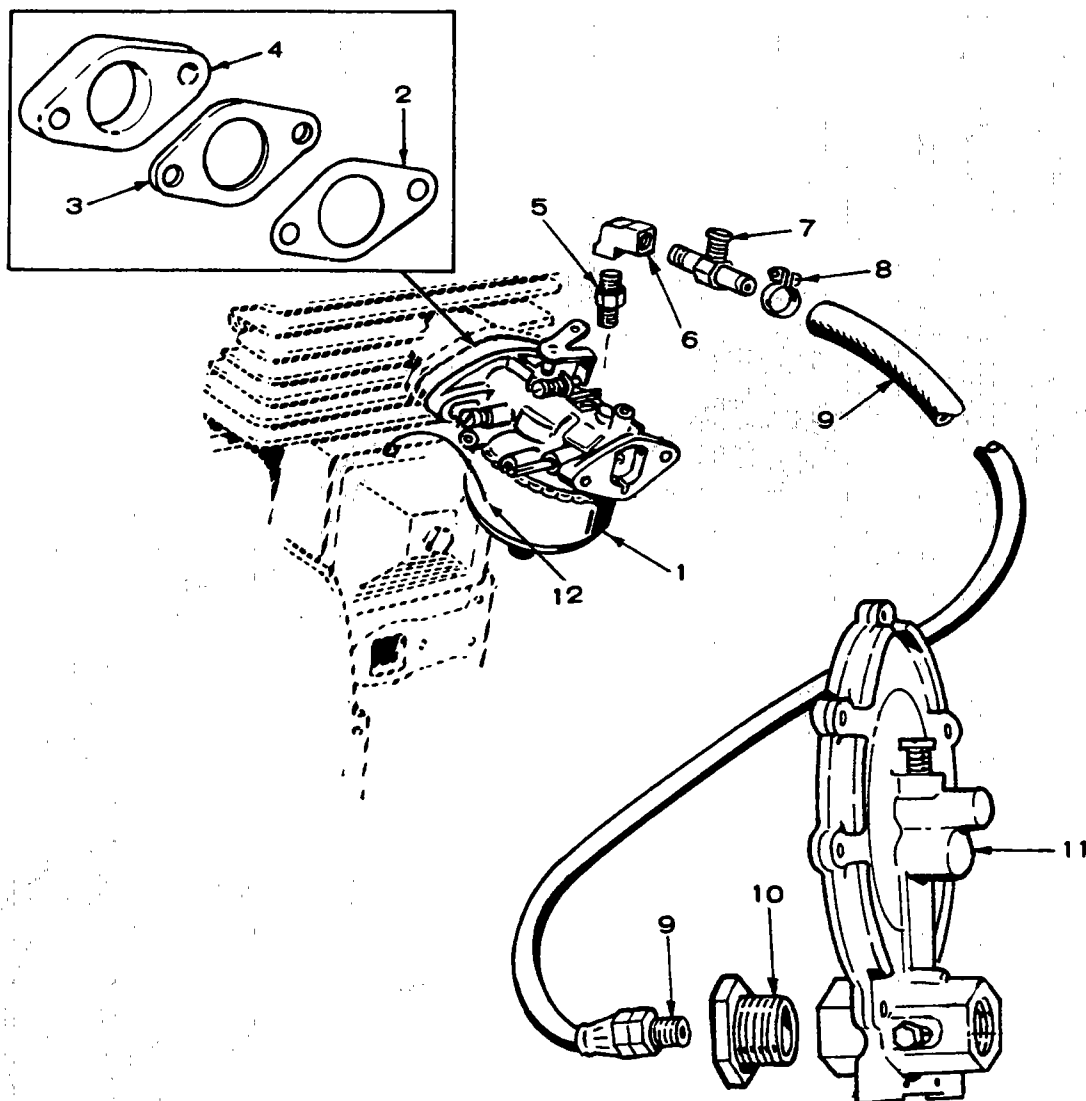
Fuel System (Gas-Gasoline) with Garretson Regulator Optional



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Carburetor, Gas-Gasoline (Includes Mounting Gasket)	9	503-0315	1	Hose, Regulator to Carburetor (1/2" ID x 2 Ft. Long)
	146-0298	1	Keys 1,3,4,5,6,7,10 (Manual Choke)	10	505-0302	1	Nipple, Half (1/4 x 1-1/2")
	146-0299	1	Keys 2,8,9 (Electric Choke)	11	505-0038	1	Elbow, Pipe - 90° (1/4")
2	141-0078	1	Gasket, Carburetor Mounting	12	505-0099	1	Nipple, Close (1/4 x 7/8")
3	145-0469	1	Plate, Carburetor Mounting	13	505-0017	1	Bushing, Reducer (3/8 x 1/4")
4	145-0110	1	Spacer, Insulating	14	148-0107	1	Vent, Atmospheric
5	502-0082	1	Nipple, Pipe - Hex (1/8-1/8")	15	505-0057	2	Plug, Pipe (1/8")
6	502-0055	1	Elbow, Pipe (90°)	16	505-0130	1	Plug, Pipe (3/4")
7	148-0178	1	Adjusting Assembly, Gas	17	148-0311	1	Regulator, Gas Pressure
8	503-0032	2	Clamp, Hose	18	145-0392	1	Lock, Carburetor Choke Shaft
					148-0390	1	Kit, Repair - Gas Regulator

NOTE: Refer to Standard Gasoline Fuel System Group for Air Cleaner, Air Cleaner Adapter, Fuel Pump, Fuel Filter and Fuel Lines (Gasoline).

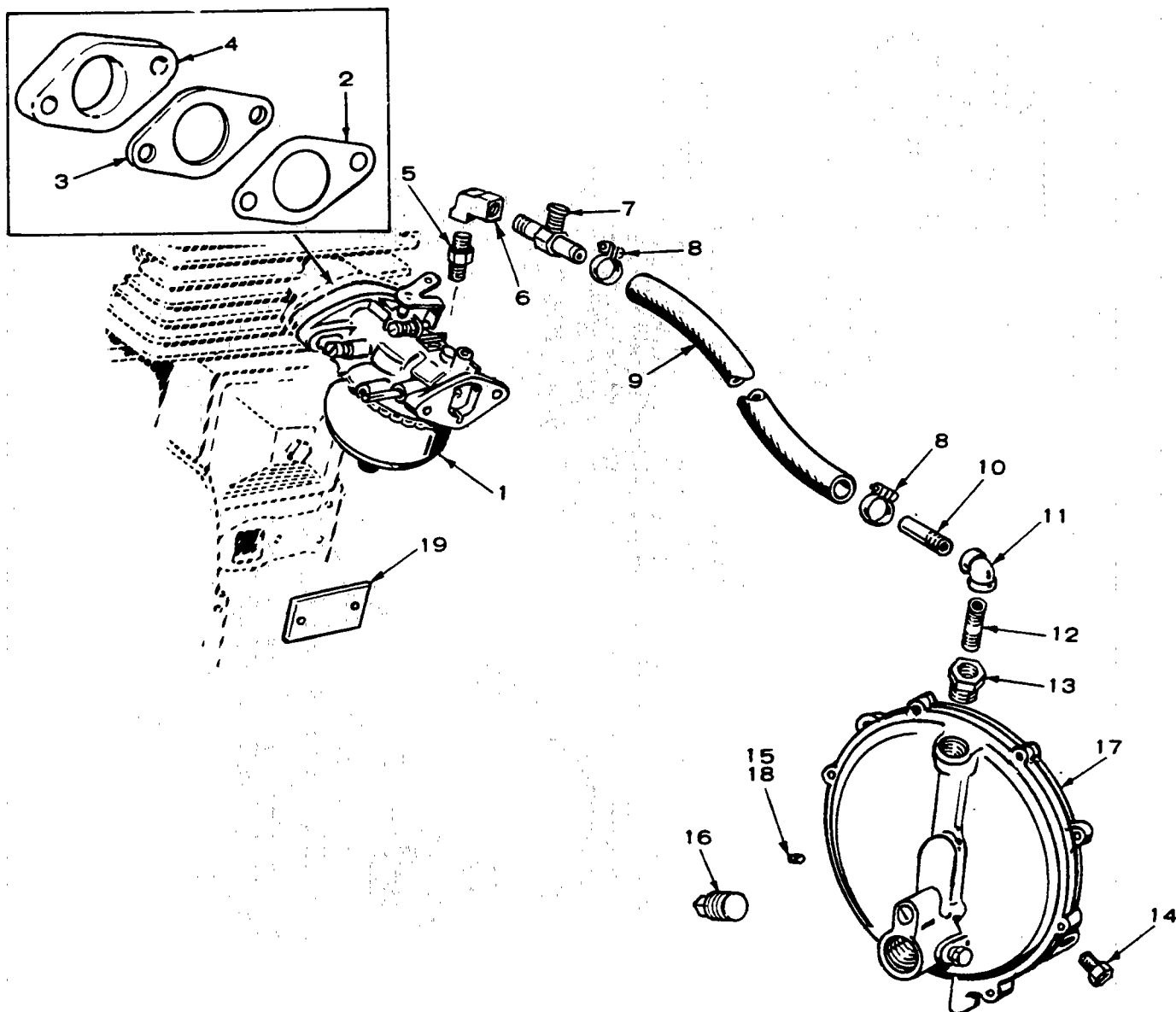
Fuel System (Gas-Gasoline) with Ensign Regulator - Optional



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Carburetor, Gas-Gasoline (Includes Mounting Gasket)	7	148-0178	1	Adjusting Assembly, Gas
	146-0298	1	Keys 1,3,4,5,6,7,10 (Manual Choke)	8	503-0027	1	Clamp, Hose
	146-0299	1	Keys 2,8,9 (Electric Choke)	9	501-0027	1	Hose, Regulator to Carburetor (48" Long)
2	141-0078	1	Gasket, Carburetor Mounting	10	505-0021	1	Bushing, Reducer (3/4 x 1/2")
3	145-0469	1	Plate, Carburetor Mounting	11	148-0311	1	Regulator, Gas Pressure
4	145-0110	1	Spacer, Insulating	12	153-0319	1	Lock, Choke Shaft
5	502-0082	1	Nipple, Pipe - Hex (1/8-1/8")		148-0300	1	Kit, Repair - Gas Regulator For Ensign Model F
6	502-0055	1	Elbow, Pipe (90°)		148-0522	1	For Ensign Model F1

NOTE: Refer to Standard Gasoline Fuel Group for Air Cleaner, Air Cleaner Adapter, Fuel Pump, Fuel Filter and Fuel Lines (Gasoline).

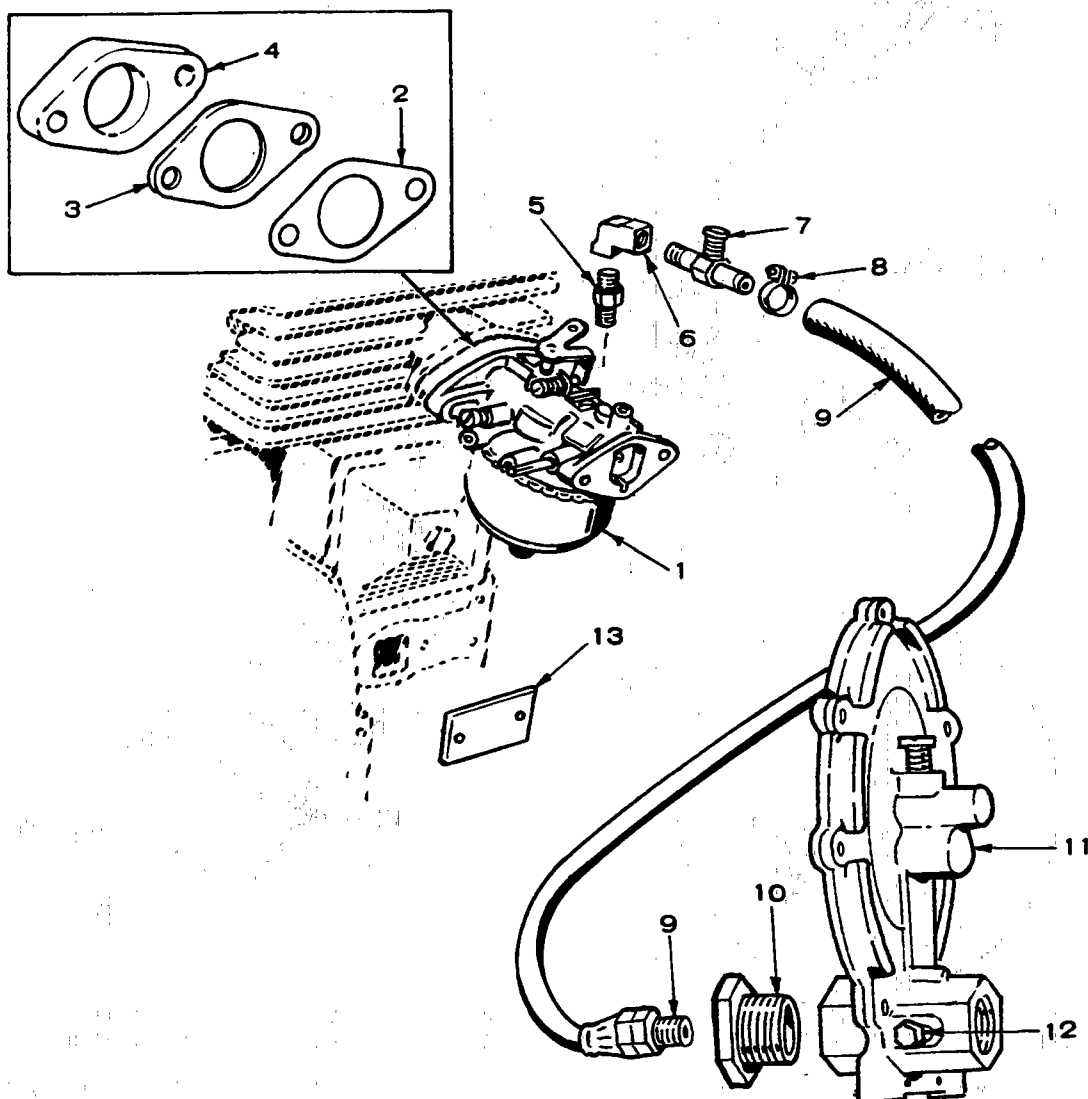
Fuel System (Gas) with Garretson Regulator - Optional



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	146-0295	1	Carburetor-Gas (Includes Mounting Gasket)
2	141-0078	1	Gasket, Carburetor Mounting
3	145-0469	1	Plate, Carburetor Mounting
4	145-0110	1	Spacer, Insulating
5	502-0082	1	Nipple, Pipe - Hex (1/8-1/8")
6	502-0055	1	Elbow, Pipe (90°)
7	148-0178	1	Adjusting Assembly, Gas
8	503-0032	2	Clamp, Hose
9	503-0315	1	Hose, Regulator to Carburetor (1/2" ID x 2 Ft. Long)
10	505-0302	1	Nipple, Half (1/4 x 1-1/2")

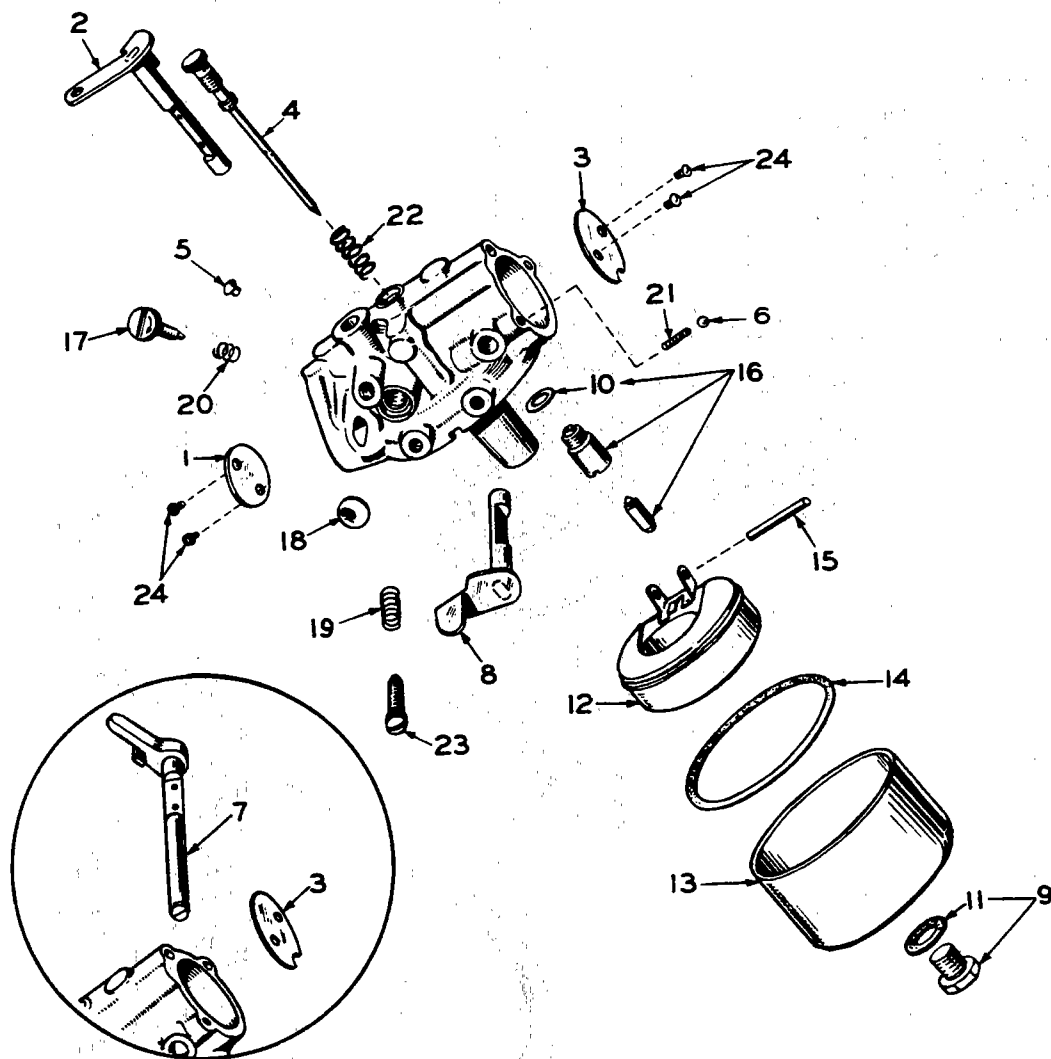
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
11	505-0038	1	Elbow, Pipe - 90° (1/4")
12	505-0099	1	Nipple, Close (1/4 x 7/8")
13	505-0017	1	Bushing, Reducer (3/8 x 1/4")
14	148-0107	1	Vent, Atmospheric
15	505-0057	2	Plug, Pipe (1/8")
16	505-0130	1	Plug, Pipe (3/4")
17	148-0311	1	Regulator, Gas Pressure
18	505-0057	1	Plug, Pipe (1/8")
19	149-0136	1	Cover, Fuel Pump Hole in Cylinder Block
	148-0390	1	Kit, Repair - Gas Regulator
	148-0510	1	Kit, Gas Conversion

Fuel System (Gas) with Ensign Regulator - Optional



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	146-0295	1	Carburetor, Gas (Includes Mounting Gasket)	10	505-0021	1	Bushing, Reducer (3/4 x 1/2")
2	141-0078	1	Gasket, Carburetor Mounting	11	148-0311	1	Regulator, Gas Pressure
3	145-0469	1	Plate, Carburetor Mounting	12	505-0057	1	Plug, Pipe (1/8")
4	145-0110	1	Spacer, Insulating	13	149-0136	1	Cover, Fuel Pump Hole in Cylinder Block
5	502-0082	1	Nipple, Pipe - Hex (1/8-1/8")				Kit, Repair - Gas Regulator
6	502-0055	1	Elbow, Pipe (90°)		148-0300	1	For Ensign Model F
7	148-0178	1	Adjusting Assembly, Gas		148-0522	1	For Ensign Model F1
8	503-0027	1	Clamp, Hose				
9	501-0027	1	Hose, Regulator to Carburetor (48" Long)				

**Carburetor Parts (Gas-Gasoline)
Specs A through J - Optional**



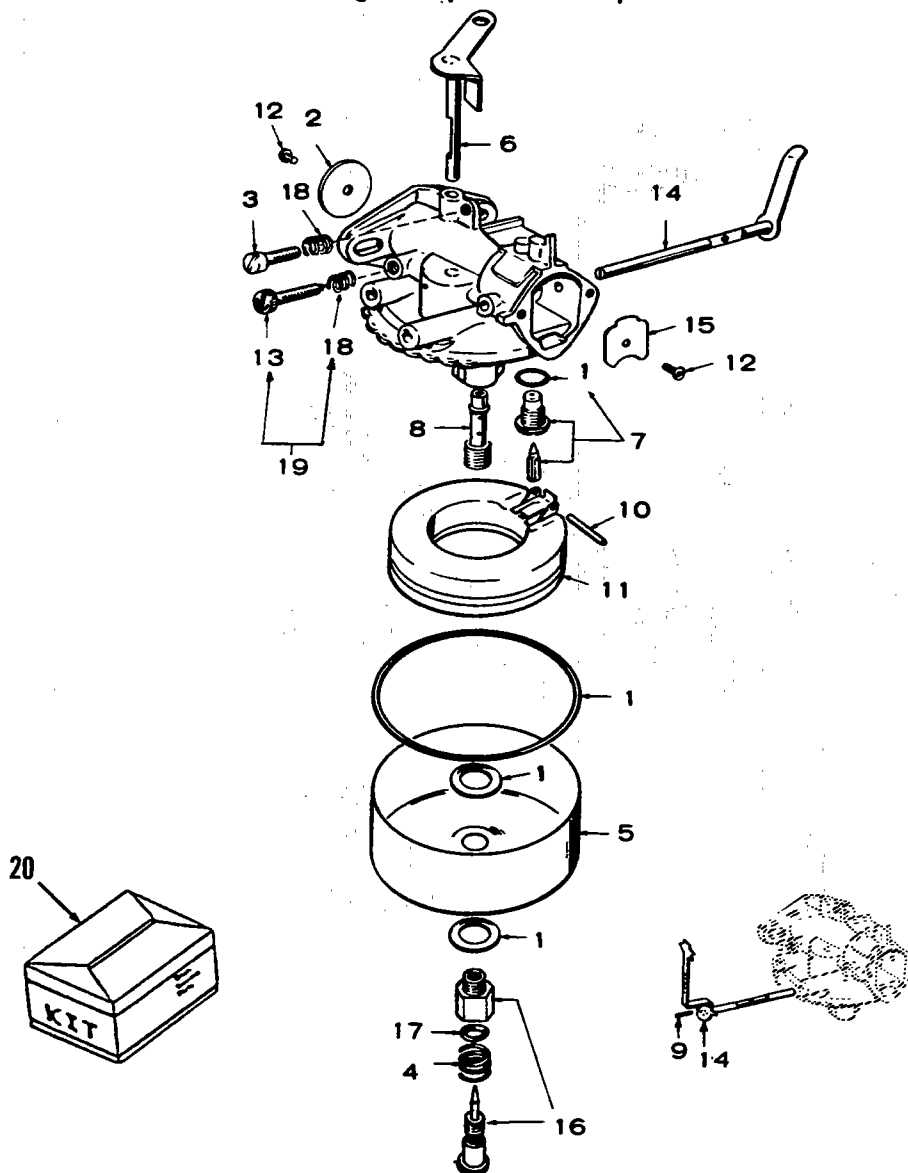
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
		1	Carburetor, Gas-Gasoline	10	143-0015	1	#†Gasket, Fuel Inlet Valve
		1	Keys 1,3,4,5,6,7,10 - Replacement Carburetor	11	143-0036	1	#†Gasket, Bowl Screw
		1	146-0094 - Manual Choke	12	143-0105	1	Float
		1	Keys 2,8,9 - Replacement Carburetor 146-0095 - Electric Choke	13	143-0119	1	Bowl
143-0081		1	Repair Kit (Includes Parts Marked †)	14	143-0077	1	#†Gasket, Bowl Ring
143-0080		1	Gasket Kit (Includes Parts Marked *)	15	141-0703	1	#Pin, Float
1 143-0097		1	Valve, Throttle	16	143-0341	1	†Valve, Fuel Inlet Kit (Includes Parts Marked #)
2 143-0098		1	Shaft and Lever Throttle	17	143-0109	1	Screw, Idle Adjustment
3 143-0267		1	Valve, Choke	18	143-0110	1	Plug, Welsh
		1	Keys 1,3,4,5,6,7,10 - Manual Choke	19	143-0111	1	Spring, Throttle Lever Adjusting Screw
		1	Keys 2,8,9 - Electric Choke	20	143-0112	1	Spring, Idle Adjusting Screw
4 143-0078		1	#†Valve Needle	21	143-0113	1	Spring Choke Shaft Stop - Keys 1,3,4,5,6,7,10
5 143-0030		1	Plug, Idle Passage	22	143-0114	1	Spring, High Speed Adjusting Needle
6 510-0083		1	Ball, Choke Shaft - Keys 1,3,4,5,6,7,10	23	143-0115	1	Screw, Throttle Lever Adjusting
7 143-0100		1	Shaft and Weight, Choke - Keys 2,8,9	24	812-0014	4	†Screw, Round Head Machine (#3-48 x 3/16")
8 143-0101		1	Shaft and Lever, Choke - Keys 1,3,4,5,6,7,10		145-0110	1	†Gasket, Carburetor Mounting
9 143-0118		1	Screw and Gasket, Bowl				

† - Included in 143-0081 Repair Kit.

* - Included in 143-0080 Gasket Kit.

- Included in 143-0341 Kit.

**Carburetor Parts (Gas-Gasoline)
Begin Spec K - Optional**

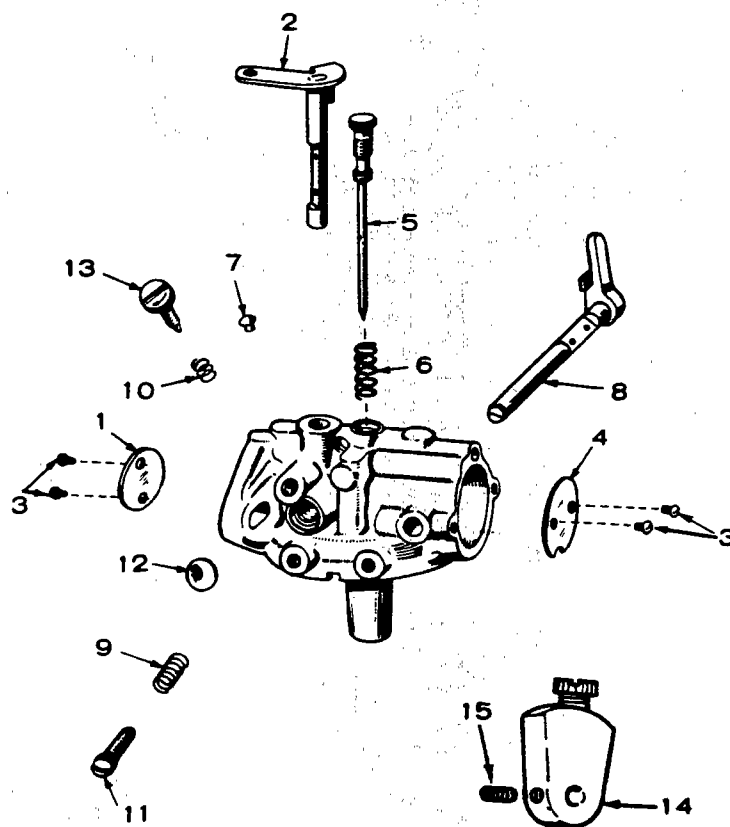


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0094	1	Carburetor, Gas-Gasoline	14	146-0108	1	Shaft Assembly, Choke
	146-0095	1	Keys 1,3,4,5,6,7,10 (Manual Choke)	15	146-0106	1	Keys 1,3,4,5,6,7,10
	146-0123	1	Keys 2,8,9 (Electric Choke)	15	146-0105	1	Keys 2,8,9
	146-0123	1	Repair Kit, Carburetor (Includes Parts Marked *)	15	146-0104	1	Valve, Choke
1	146-0124	1	*Gasket Kit, Carburetor	16	146-0102	1	Keys 1,3,4,5,6,7,10
2	146-0119	1	Valve, Throttle	17	146-0120	1	Keys 2,8,9
3	146-0122	1	+Screw, Throttle Stop	18	146-0186	1	*Needle Assembly, Power
4	146-0117	1	Spring, High Speed Needle	19	146-0209	1	Seal, "O" Ring - High Speed Needle
5	146-0118	1	Bowl, Fuel	18	146-0186	1	§Spring, Throttle Stop Screw and Idle Screw
6	146-0112	1	Shaft Assembly, Throttle	19	146-0209	1	Needle Assembly, Idle Adjust (Package) (Includes Parts Marked §)
7	146-0145	1	*Float Valve, Seat and Gasket Assembly	20	146-0261	1	Kit, Screw - Throttle Adjusting (Includes Parts Marked +)
8	146-0113	1	Nozzle				
9	146-0114	1	Spring, Choke Stop - Keys 1, 3,4,5,6,7,10				
10	146-0111	1	*Shaft, Float				
11	146-0110	1	Float Assembly				
12	146-0109	2	Screw and Washer				
13	146-0116	1	§*Needle, Idle				

* - Included in 146-0123 Carburetor Repair Kit.
§ - Parts Included in 146-0209 Needle Assembly (Package).

+ - Part Included in 146-0261 Kit.

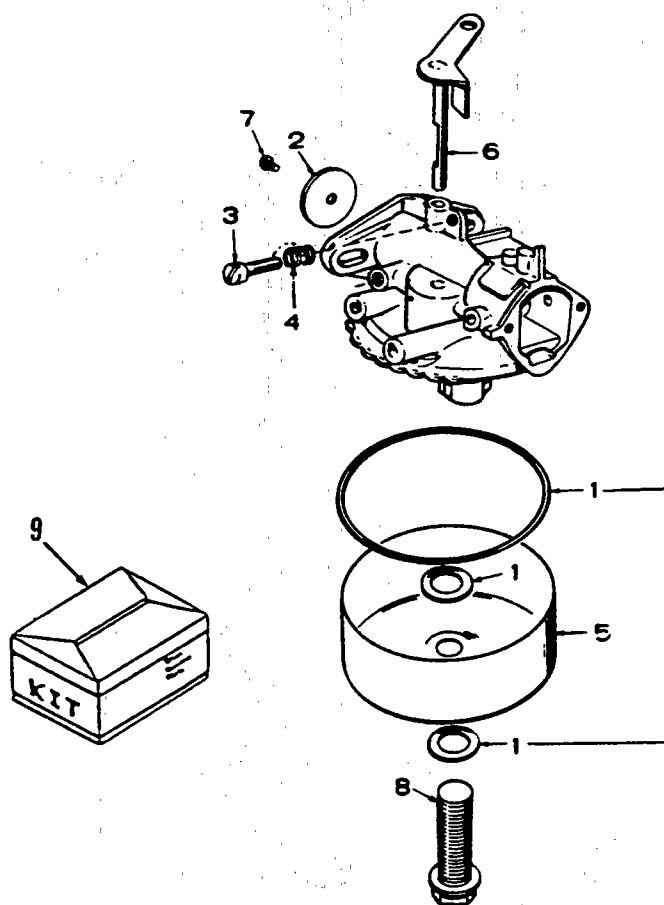
Carburetor Parts (Gas) - Specs A through J - Optional



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
		1	Carburetor, Gas (Replacement Carburetor Order Carburetor Number 146-0091)
1	143-0097	1	Valve, Throttle
2	143-0098	1	Shaft and Lever, Throttle
3	812-0014	4	Screw, Round Head (#3-48 x 3/16")
4	148-0269	1	Valve, Choke
5	148-0268	1	Valve, High Speed Needle
6	143-0114	1	Spring, High Speed Needle
7	143-0030	1	Plug, Idle Passage

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	143-0100	1	Shaft and Weight, Choke
9	143-0111	1	Spring, Throttle Stop Screw
10	143-0112	1	Spring, Idle Adjusting Screw
11	143-0115	1	Screw, Throttle Stop
12	143-0110	1	Plug, Welsh
13	143-0109	1	Screw, Idle Adjustment
14			Counterweight, Choke Shaft
	148-0267	1	Non-Adjustable
	148-0412	1	Adjustable
15	815-0230	1	Screw, Set - Socket - Hex (1/4-20 x 5/8")

Carburetor Parts (Gas) - Begin Spec K - Optional

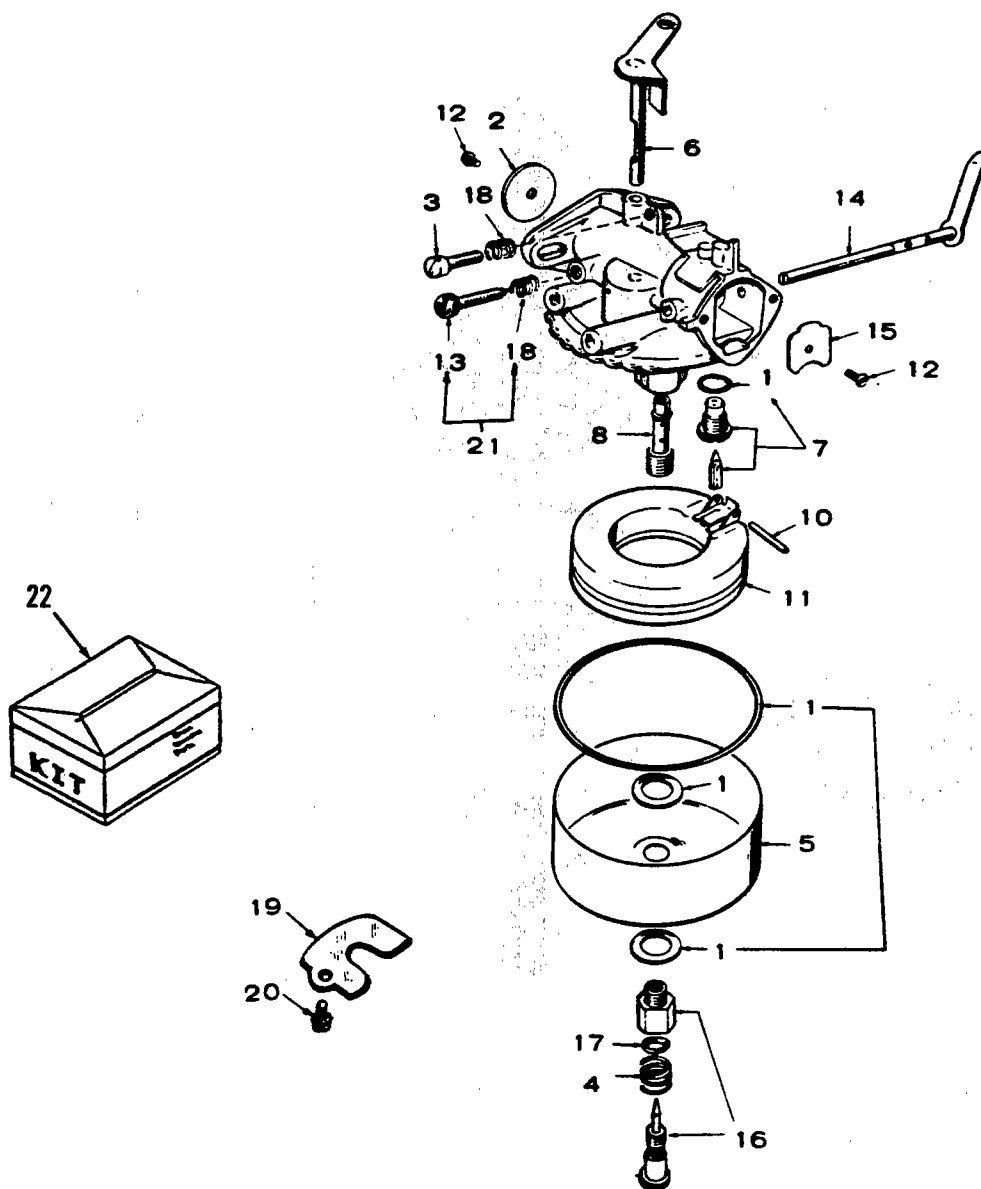


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0091	1	Carburetor, Gas
1	146-0124	1	Gasket Kit, Carburetor
2	146-0119	1	Valve, Throttle
3	146-0122	1	+Screw, Throttle Stop
4	146-0186	1	+Spring, Throttle Stop Screw
5	146-0118	1	Bowl, Fuel

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	146-0112	1	Shaft Assembly, Throttle
7	146-0109	1	Screw and Washer
8	146-0103	1	Screw, Bowl Retainer
9	146-0261	1	Kit, Screw - Throttle Adjusting (Includes Parts Marked +)

+ - Parts Included in 146-0261 Kit.

Carburetor Parts (Rough Service Gasoline)
Keys 2,8,9 - Begin Spec K
Optional



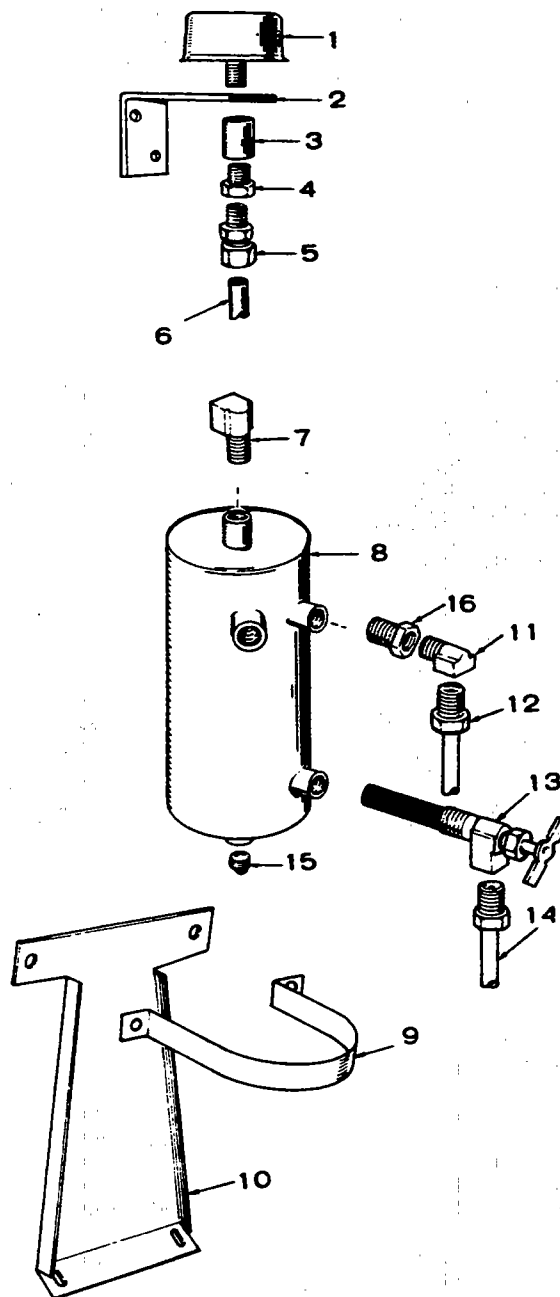
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0140	1	Carburetor, Rough Service - (For complete Carburetor Assembly order #146-0305 Kit)
1	146-0124	1	Gasket Kit, Carburetor
2	146-0119	1	Valve, Throttle
3	146-0122	1	+Screw, Throttle Stop
4	146-0117	1	Spring, High Speed Needle
5	146-0118	1	Bowl, Fuel
6	146-0112	1	Shaft Assembly, Throttle
7	146-0145	1	Float Valve, Seat and Gasket Assembly
8	146-0113	1	Nozzle
10	146-0111	1	Shaft, Float
11	146-0110	1	Float Assembly
12	146-0109	2	Screw and Washer
13	146-0116	1	*Needle, Idle
14	146-0107	1	Shaft Assembly, Choke
15	146-0104	1	Valve, Choke

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
16	146-0102	1	Needle Assembly, Power
17	146-0120	1	Seal, "O" Ring - High Speed Needle
18	146-0186	1	+*Spring, Throttle Stop Screw and Idle Screw
19	146-0143	1	Baffle, Splash
20	146-0142	1	Screw and Washer, Splash Baffle Mounting
21	146-0209	1	Needle Assembly, Idle Adjust (Package) (Includes Parts Marked *)
22	146-0261	1	Kit, Screw - Throttle Adjusting (Includes Parts Marked +)

* - Parts Included in 146-0209 Needle Assembly
(Package).

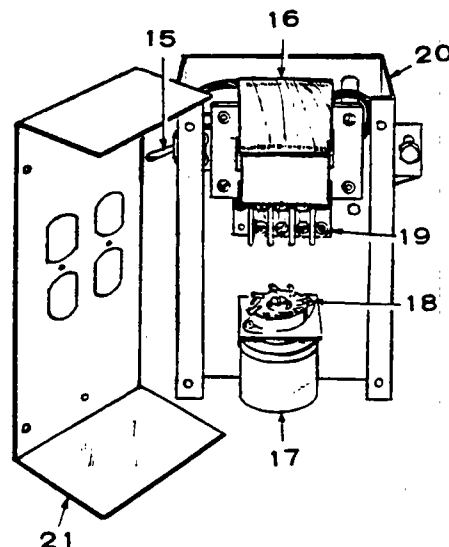
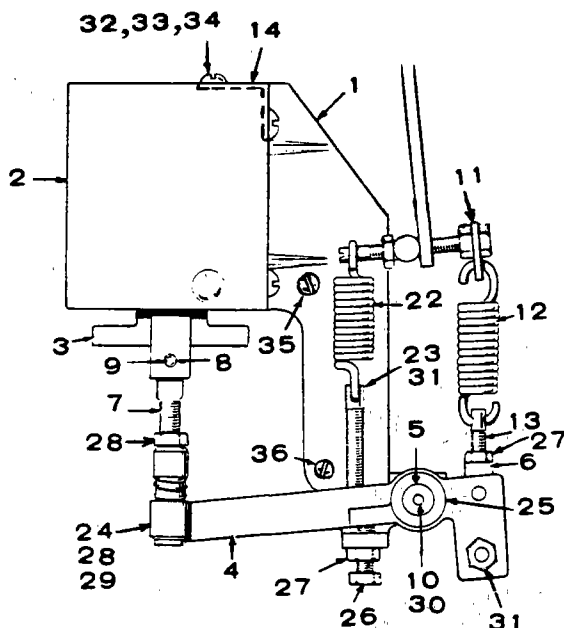
+ - Parts Included in 146-0261 Kit.

Reservoir (Day) Tank - One Quart - Optional



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	159-0041	1	Cap, Vent	10	159-0567	1	Bracket, Reservoir Tank Mounting
2	415-0055	1	Bracket, Vent Cap	11	502-0002	1	Elbow, Street (90° - 1/4")
3	505-0028	1	Coupling, Pipe (3/8")	12	159-0569	1	Line, Fuel - to Fuel Pump (18")
4	505-0016	1	Bushing, Reducer (3/8 to 1/8")	13	504-0013	1	Valve, Shut-off
5	502-0116	1	Connector, Compression	14	159-0566	1	Line, Fuel - to Carburetor
6	159-0345	1	Tubing, Copper (5/16 x 12")	15	505-0057	1	Plug, Tank Drain (1/8")
7	502-0004	1	Elbow, Compression (90°)	16	502-0050	1	Bushing, Reducer (3/8 to 1/4")
8	159-0294	1	Tank, Reservoir				
9	159-0121	1	Band, Reservoir Tank				

Idlematic Control - Keys 4,5,6,7 - Optional

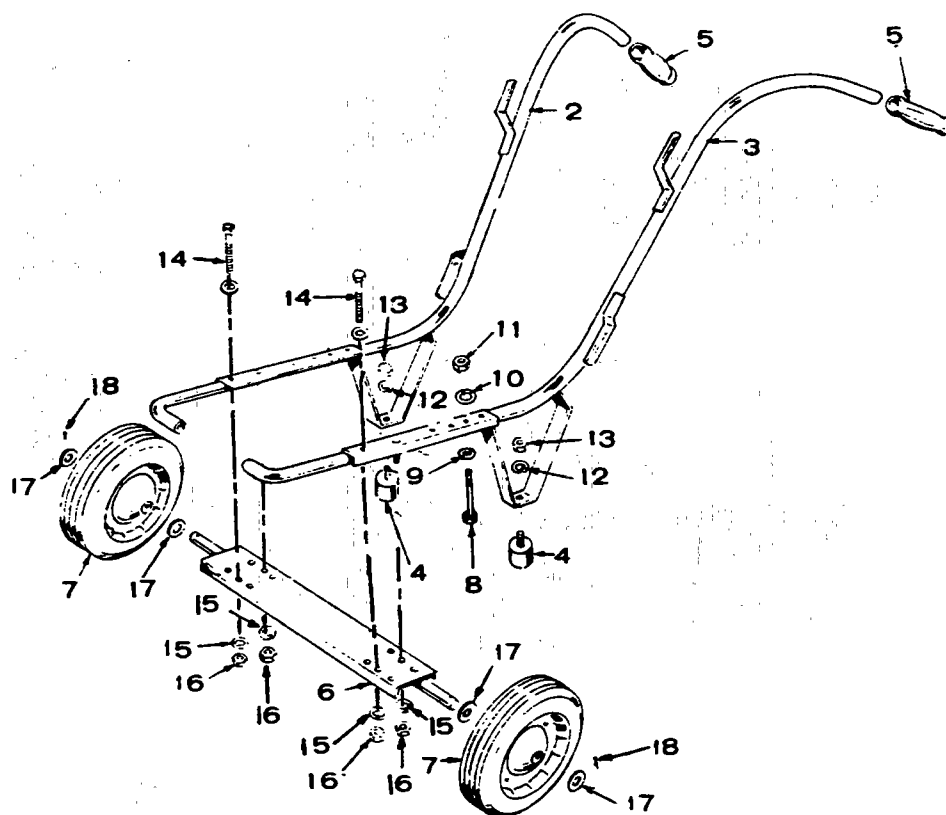
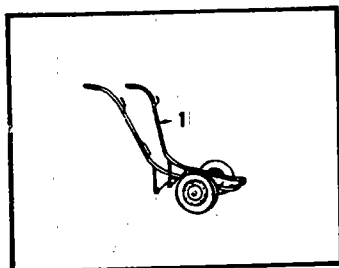


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0792	1	*Bracket, Solenoid
2	150-0795	1	Cover, Solenoid
3	307-0604	1	Solenoid, Idle
	307-0669	1	120 Volt Models
		1	240 Volt Models
4	150-0794	1	*Lever, Idle
5	510-0073	1	*Bearing, Idle Lever
6	150-0639	1	Joint, Ball - Idle Lever to Spring
7	145-0241	1	Link Solenoid
8	508-0091	2	Bushing, Solenoid Plunger (9/64 ID x 3/8" OD)
9	516-0125	1	Pin, Link-to-Solenoid (1/8 x 1-1/2")
10	815-0231	1	Bolt, Stripper (1/4-20 x 3/4") - Idle Lever
11	150-0793	1	Link, Idle Control
12	150-0115	1	Spring, Idle Control
13	150-0796	1	Stud, Idle Control
14	518-0192	3	Clip, Angle - Solenoid Mounting
15	308-0002	1	Switch, Idle Solenoid
16	302-0147	1	Transformer
17	307-0062	1	Relay, Idle Control
18	323-0321	1	Socket Relay - Idle Control
19	332-0406	1	Block, Terminal (3 Place)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
20	301-1898	1	Box, Receptacle
21	302-1899	1	Cover, Receptacle Box
22	150-0098	1	Spring, Governor
23	150-0213	1	*Stud, Governor
24	150-0638	1	Joint, Ball - Idle Lever to Solenoid
25	526-0115	1	Washer, Flat (11/32 ID x 11/16 OD x 1/16" Thk)
26	815-0178	1	Screw (10-32 x 5/8")
27	870-0053	2	Nut, Hex (10-32)
28	115-0025	2	Nut, Hex (Special)
29	850-0040	1	Washer, Lock (1/4)
30	862-0001	1	Nut, Hex (1/4-20)
31	870-0131	2	Nut, Lock (10-32)
32	812-0100	8	Screw (10-24 x 1/2")
33	860-0011	2	Nut, Hex (10-24)
34	850-0030	2	Washer, Lock (#10)
35	813-0102	2	Screw (10-32 x 5/8") - Bracket Mounting
36	813-0103	1	Screw (10-32 x 3/4") - Bracket Mounting

* - Prior to Serial 740.000 during Spec G Order 150-0972 Bracket and Lever Control (Kit).

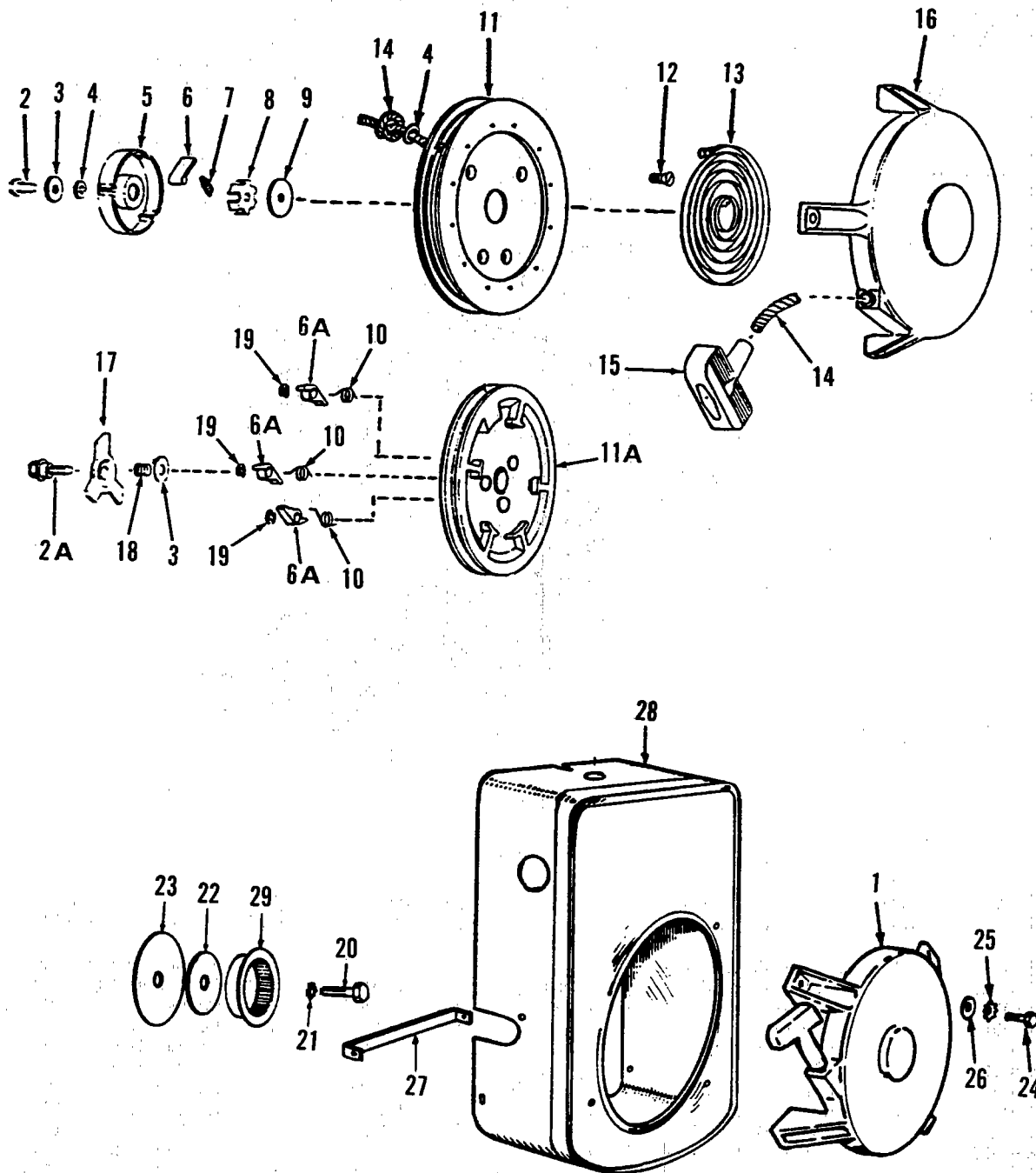
Dolly Parts - Keys 1,4,6,10 - Optional



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	410-0219	1	Dolly, Complete
2	410-0216	1	Base and Handle, Right Side
3	410-0215	1	Base and Handle, Left Side
4	402-0040	2	Cushion, Rubber
5	403-0205	2	Grip, Rubber
6	410-0222	1	Axle
7	410-0223	2	Wheel and Tire
8	800-0058	4	Screw, Cap - Hex Head (3/8-16 x 3")
9	526-0030	4	Washer, Flat (13/32" ID x 7/8" OD x 1/8" Thk)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
10	850-0050	4	Washer, Lock - Spring (3/8")
11	862-0003	4	Nut, Hex (3/8-16)
12	850-0045	2	Washer, Lock - Spring (5/16")
13	862-0015	2	Nut, Hex (5/16-18)
14	814-0203	2	Screw, Machine - Flat Head (3/8-16 x 2")
15	850-0050	4	Washer, Lock - Spring (3/8")
16	862-0003	4	Nut, Hex (3/8-16)
17	526-0112	4	Washer, Flat (11/16" ID x 1-3/8" OD x 7/64" Thk)
18	516-0042	2	Key, Cotter (1/8 x 1")

Readi-Pull Starter (Heavy Duty)
Includes Air Housing
- Optional

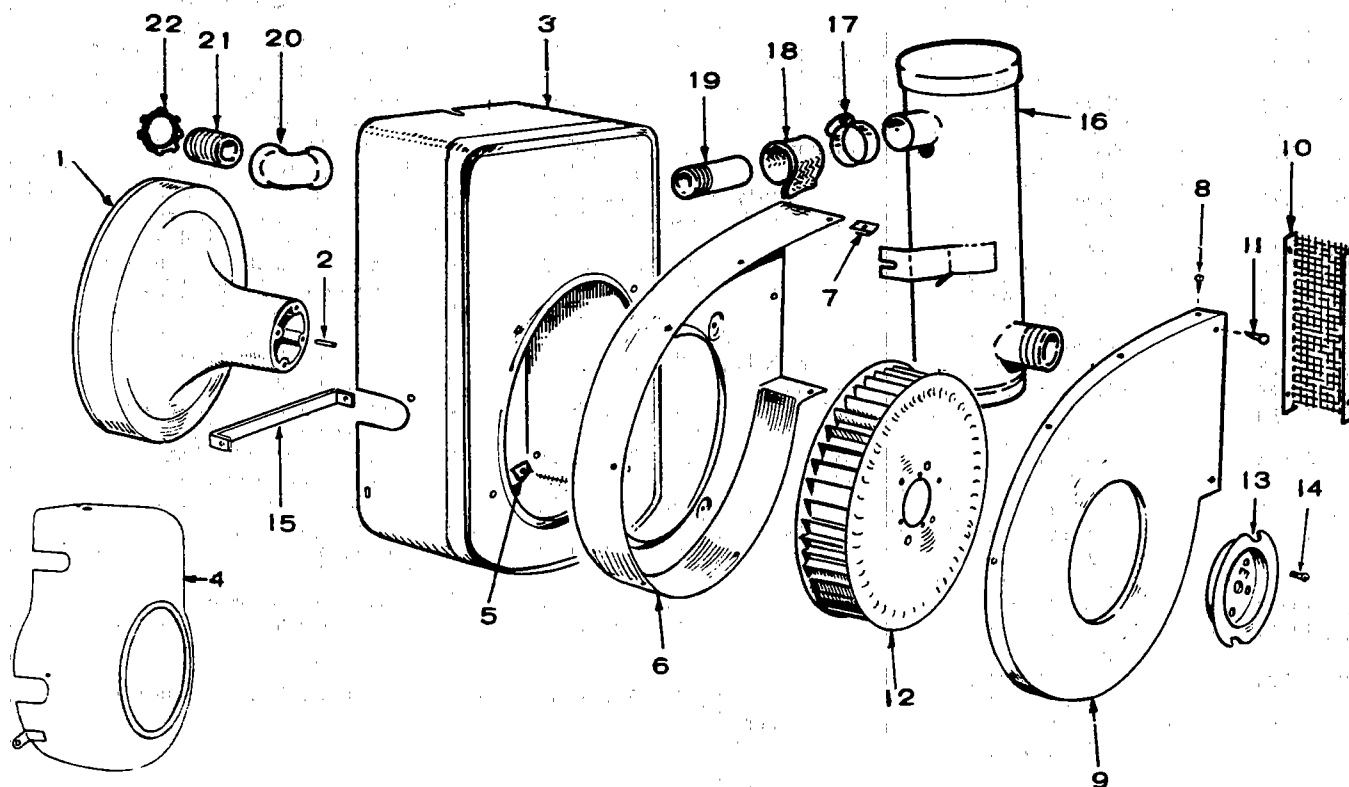


Readi-Pull Starter (Heavy Duty)
Includes Air Housing
- Optional

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	192-0363	1	Starter, Recoil - Heavy Duty (Includes Parts Marked *)	15	192-0282	1	*Handle Assembly, Starter (For Old and New Style)
2	192-0371	1	*Screw, Retainer (Old Style)	16	192-0383	1	*Housing, Starter (For Old and New Style)
2A	192-0423	1	*Screw, Retainer (New Style)	17	192-0429	1	*Cam, Dog (New Style Only)
3	192-0372	1	*Washer, Brake (For Old and New Style)	18	192-0430	1	*Spring, Brake (New Style Only)
4	192-0373	2	*Washer, Spacer (Old Style Only)	19	192-0431	3	*Ring, Retainer (New Style Only)
5	192-0374	1	*Retainer (Old Style Only)	20	800-0080	1	Screw, Cap - Hex Head (7/16-14 x 3-1/4")
6	192-0375	3	*Dog, Starter (Old Style)	21	856-0012	1	Washer, Lock - External Internal Tooth (7/16")
6A	192-0424	3	*Dog (New Style)	22	526-0172	1	Washer, Flat (1/2" ID x 2-1/4" OD x 1/4" Thk)
7	192-0376	1	*Spring, Retainer (Old Style Only)	23	526-0195	1	Washer, Flat (29/64" ID x 3-1/4" OD x 1/8" Thk)
8	192-0377	1	*Brake (Old Style Only)	24	800-0005	4	Screw, Cap - Hex Head (1/4-20 x 3/4")
9	192-0378	1	*Washer, Thrust (Old Style Only)	25	856-0006	4	Washer, Lock - External Internal Tooth (1/4")
10	192-0425	3	*Spring, Dog (New Style Only)	26	526-0021	4	Washer, Flat (17/64" ID x 3/4" OD x 1/16" Thk)
11	192-0380	1	*Pulley & Sheave Assembly (Old Style)	27	134-1697	1	Bracket, Support - Blower Housing
11A	192-0426	1	*Pulley & Sheave Assembly (Plastic) (New Style)	28	134-1698	1	Housing, Blower
12	192-0381	4	*Screw, Sheave (Early Production Only) (Old Style Only)	29	192-0364	1	Cup, Engaging - Starter
13			*Spring, Rewind				
	192-0382	1	Old Style				
	192-0427	1	New Style				
14			*Rope, Starter				
	192-0224	1	114" Long x 3/16" Diameter (Old Style)				
	192-0428	1	114" Long x 11/64" Diameter (New Style)				

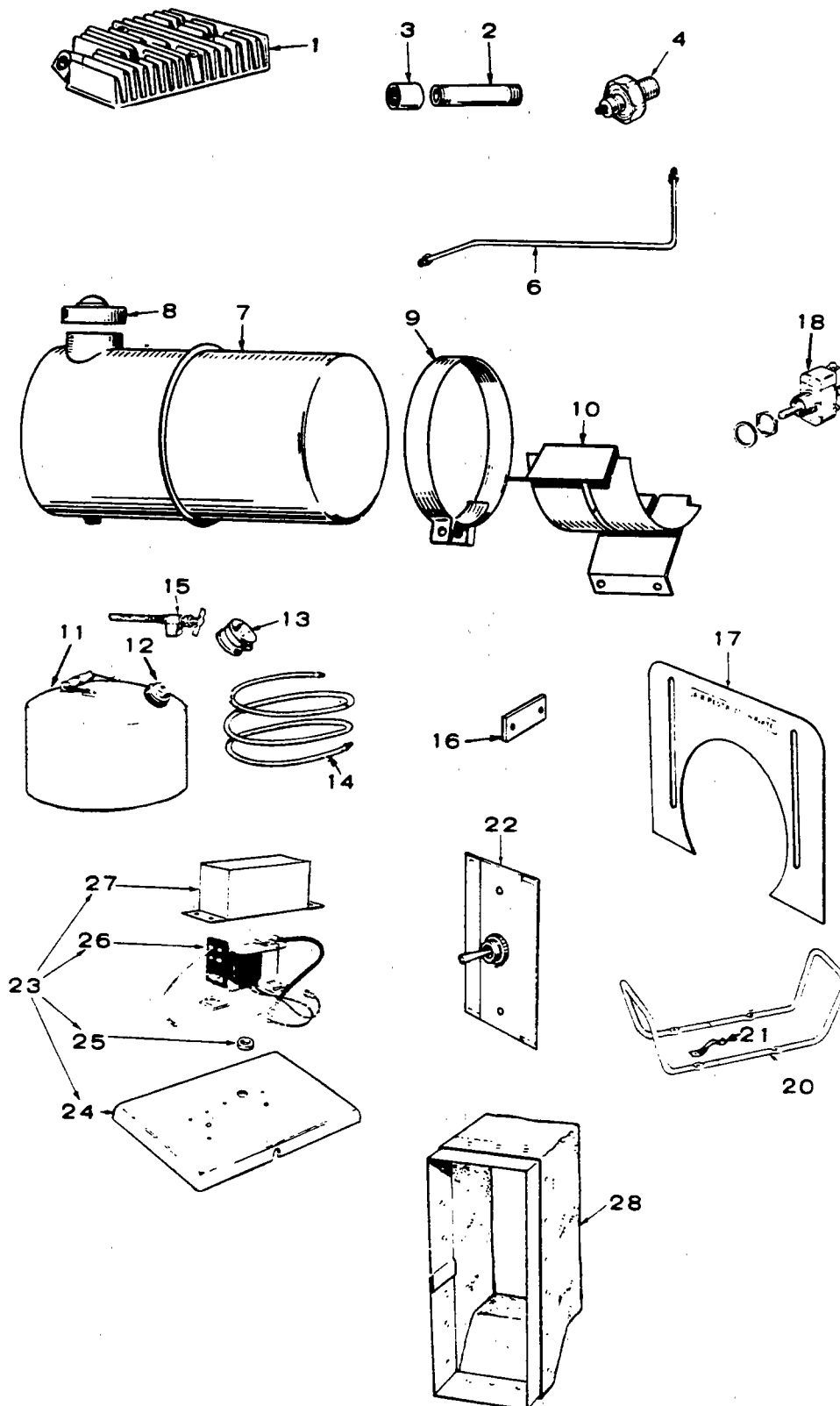
* - Parts Included in 192-0363 Recoil Starter

Vacu-Flo Cooling System
(Includes Flywheel and Muffler)
- Optional



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Flywheel, Magneto	11	815-0421	4	Screw, Cap - Hex Head Tapping
			Keys 1,2,3,10				W/ET Washer (#10-16 x 1/2")
	160-0672	1	Begin Spec G	12	134-0563	1	Wheel, Blower
	160-0470	1	Specs A through F	13	192-0261	1	Sheave, Rope
			Keys 4,5,6,7,8,9	14	812-0150	2	Screw, Machine - Round Head
	160-0729	1	Begin Spec G				(1/4-20 x 5/8")
	160-0466	1	Specs A through F	15	134-1014	1	Bracket, Blower Housing
2	516-0091	2	Pin, Groove (3/16 x 1/2")				Support
3	134-1101	1	Housing, Blower - Begin Spec G	16	155-0696	1	Muffler, Exhaust - Begin
4	134-0609	1	Housing, Blower - Specs A				Spec G
			through F	17	503-0189	1	Clamp, Muffler - Begin Spec G
5			Nut, Speed (U Type)	18	895-0096	1	Asbestos Strip - Begin Spec G
	870-0126	3	Begin Spec G	19	505-0431	1	Nipple, Half - Begin Spec G
	870-0119	3	Specs A through F				(3/4 x 6-1/2")
6			Scroll, Air - Rear	20	505-0132	1	Elbow, Pipe (3/4" x 90°) -
	134-1015	1	Begin Spec G				Begin Spec G
	134-0571	1	Specs A through F	21			Nipple, Pipe
7	870-0120	8	Nut, Speed (J Type)		505-0102	1	Begin Spec G (3/4 x Close)
8	809-0043	11	Screw, Tapping (#10 x 3/8")		505-0341	1	Specs A through F (3/4 x 5")
9	134-0570	1	Scroll, Air - Front	22	331-0038	1	Locknut, Chase (Special)
10	134-3080	1	Guard, Scroll Outlet				

Miscellaneous Optional Parts



M-1365

Miscellaneous Optional Parts

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	110-1779	1	Head, Cylinder - High Compression (Gas Conversion Kit)	21			Strap, Ground - Blower Housing to Carrying Frame
2	505-0076	1	Nipple, Pipe - Oil Drain (3/8 x 3")		337-0044	1	Keys 1,4,6,10 (6")
3	505-0028	1	Coupling, Pipe - Oil Drain (3/8")		337-0051	1	Keys 5,8,9 (3")
4	309-0237	1	Switch, Low Oil Pressure	22	308-0165	1	Switch and Plate - Remote Start-Stop - Keys 2,8,9
6	159-0504	1	Line, Fuel - Tank to Filter - Keys 2,3 - Specs A through F	23	300-0224	1	Relay Assembly - Start Disconnect - Key 2 - Specs A through F with Load Transfer Control (Includes Parts Marked *)
7	159-0488	1	+Tank, Fuel (1.4 Gallons) - Keys 2,3 - Specs A through F	24	301-1492	1	*Cover, Control Box - Key 2 - Specs A through F with Load Transfer Control
8	159-0007	1	Cap, Fuel Tank - Keys 2,3 - Specs A through F	25	508-0002	1	*Grommet, Control Box Cover to Start Disconnect Relay - Key 2 - Specs A through F with Load Transfer Control
9	159-0154	2	+Band, Fuel Tank Mounting - Keys 2,3 - Specs A through F	26	307-0642	1	*Relay, Start Disconnect - Key 2 - Specs A through F with Load Transfer Control
10	159-0486	1	Bracket, Fuel Tank Mounting - Keys 2,3 - Specs A through F	27	301-1493	1	*Cover, Start Disconnect Relay - Key 2 - Specs A through F with Load Transfer Control
11	415-0126	1	Tank, Fuel (5 Gallon)	28	405-1058	1	Anti-Vibration Package - Vacu-Flo Cooled Units
12	415-0313	1	Cap, Fuel Tank				
13	415-0124	1	Cap, Rain - Fuel Tank				
14	501-0027	1	Line, Flexible (48")				
15	504-0013	1	Valve, Shut-off (with Strainer) - Fuel Tank				
16	149-0136	1	Cover, Fuel Pump Hole in Cylinder Block				
17	134-1438	1	Plate, Air Restriction - Key 3 (24 Volt) - Begin Spec J				
18	308-0097	1	Switch, Momentary - Low Oil Pressure Switch				
20			Frame, Carrying (Includes Attaching Hardware)				
	403-0365	1	Keys 1,4,6,10				
	403-1116	1	Keys 8,9				

* - Parts Included in 300-0224 Start Disconnect Relay Assembly.

+ - Parts Included in 159-0539 Kit.

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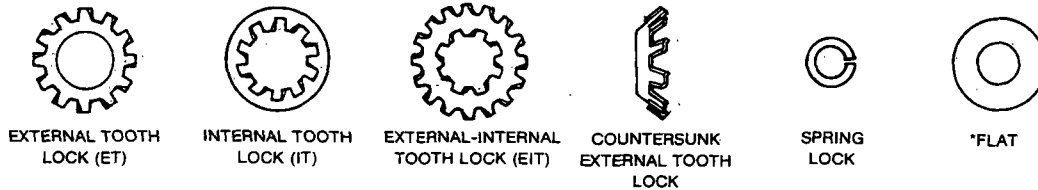
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HARDWARE IDENTIFICATION

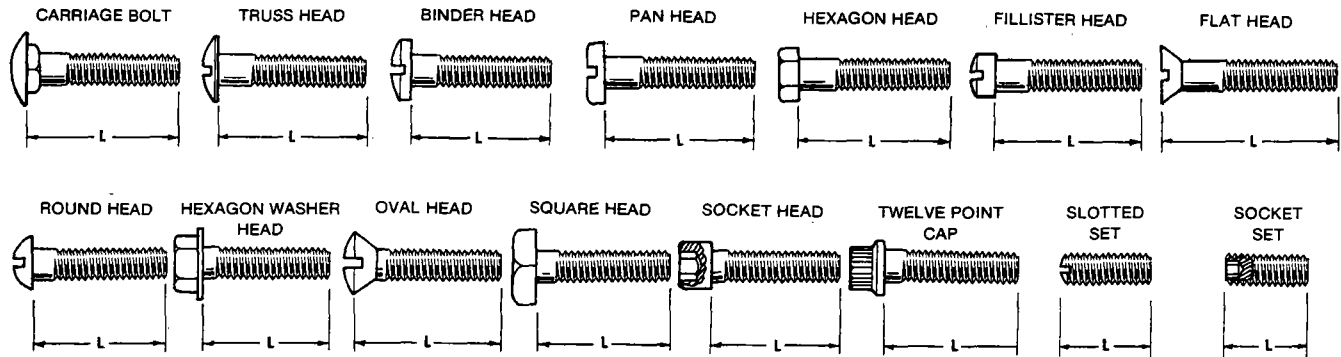
Illustrated hardware items are only for identification purposes. All hardware items listed throughout this parts catalog are steel SAE grade five (5) or lower (zinc plated with clear chromate dip) unless parts description indicates differently. All dimensions are in inches.

WASHER TYPES



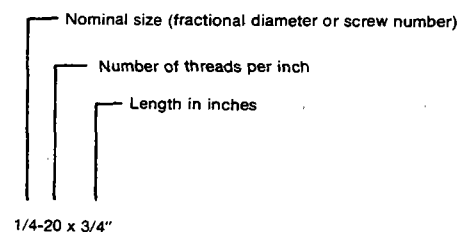
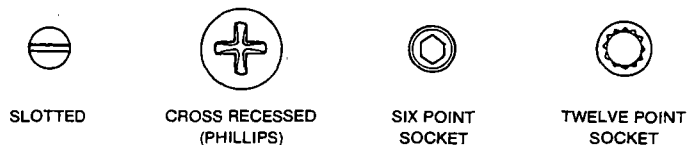
* - Flat washer dimensions given are: Inside Diameter (ID), Outside Diameter (OD) and Thickness (Thk).

BOLT AND SCREW TYPES



L - Measure length between these points.

INTERNAL DRIVE TYPES



NUT TYPES

